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New England

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A logging team in the White Mountains

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New England

A Human Interest Geographical Reader

By Clifton Johnson

With Two Hundred Illustrations

Published by The Macmillan Company
New York *MCMXVII*
London: Macmillan and Co., Limited

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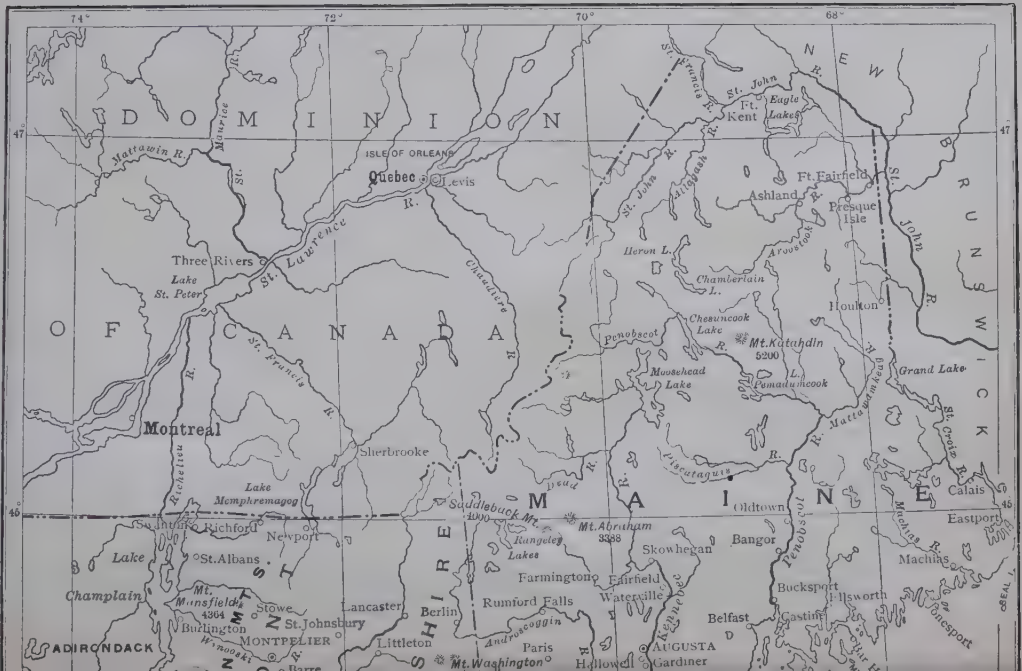
Introductory Note

THE text of this book presents a general view of those characteristics which give New England interest and charm. The facts are drawn from geology, nature, and history, and from industry in many forms on land and sea. Biography, literature, legend, and humor have also each added their portion. That every chapter shall be entertaining as well as instructive, and that, above all, the text shall have constant human interest, has been the chief purpose in selecting what has been included.

One point concerning New England I would like to emphasize here. Other parts of the country can raise far larger crops of various kinds, such as corn, wheat, and oats, but New England is unrivalled as the place to raise men. Its famous sons and daughters have conferred on it a great attraction; and in our travels, viewing the farms and factories, the forests and waterways, the mountains, the rural towns, and the big cities, we shall often pause to visit the homes or the birthplaces of some of the worthies of the past whose names the whole nation treasures.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Levis
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Three Rivers
Lake St. Peter
Chaudiere R.
St. Francis R.
Montreal
Richelieu R.
Lake Memphremagog
Sherbrooke
Saddleback Mt. 4000
Mt. Abraham 3388
Rangeley Lakes
Richford
Newport
Lake Champlain
St. Albans
Mt. Mansfield 4364
Stowe
Burlington
MONTPELIER
St. Johnsbury
ADIRONDACK
Lancaster
Berlin
Littleton
Mt. Washington
Rumford Falls
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Kennebec R.
Waterville
Fairfield
Skowhegan
Augusta
Hallowell
Gardiner
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Oldtown
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Bucksport
Ellsworth
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Calais
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Aroostook R.
Chamberlain L.
Heron L.
Houlton
Presque Isle
Ashland
Ft. Fairfield
St. John R.
Allagash R.
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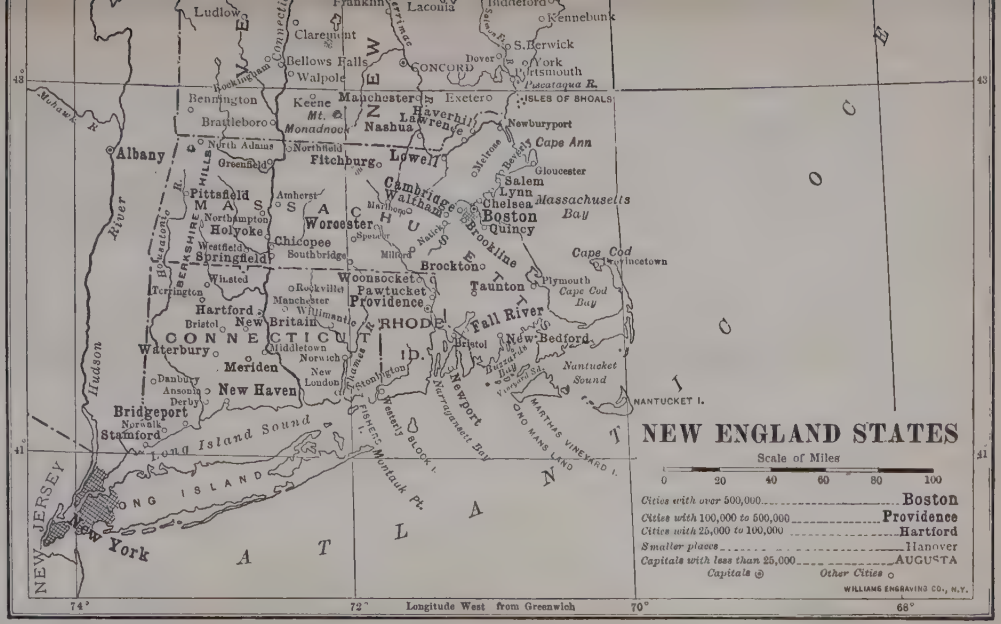
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Claremont
Bellows Falls
Walpole
Keene
Mt. Monadnock
Manchester
Nashua
Concord
Dover
Portsmouth
Exeter
Isles of Shoals
Kennebunk
S. Berwick
Piscataqua R.
Newburyport
Cape Ann
Gloucester
Salem
Lynn
Chelsea
Boston
Quincy
Massachusetts Bay
Cape Cod
Provincetown
Plymouth
Cape Cod Bay
Nantucket Sound
Nantucket I.
Martha's Vineyard I.
Block I.
Montauk Pt.
Long Island Sound
Long Island
New York
New Jersey
Albany
Troy
Bennington
Brattleboro
North Adams
Greenfield
Fitchburg
Lowell
Haverhill
Lawrence
Cambridge
Waltham
Brookline
Pittsfield
Amherst
Northampton
Holyoke
Springfield
Chicopee
Southbridge
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Milford
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Fall River
New Bedford
Bristol
Westfield
Winsted
Torrington
Rockville
Manchester
Willimantic
Woonsocket
Pawtucket
Providence
Hartford
New Britain
Bristol
Middletown
Norwich
New London
Waterbury
Meriden
New Haven
Danbury
Ansonia
Derby
Bridgeport
Norwalk
Stamford
Newport
Narragansett Bay
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Thames R.
Merrimack R.
Piscataqua R.
Berkshire Hills
Green Mts.
Massachusetts
Connecticut
Rhode Island
Atlantic Ocean
NEW ENGLAND STATES
Scale of Miles
0 20 40 60 80 100
Cities with over 500,000 — Boston
Cities with 100,000 to 500,000 — Providence
Cities with 25,000 to 100,000 — Hartford
Smaller places — Hanover
Capitals with less than 25,000 — AUGUSTA
Capitals ◉ Other Cities ○
WILLIAMS ENGRAVING CO., N.Y.
74° 72° Longitude West from Greenwich 70° 68°
42 41

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New England

A Massachusetts log house in 1890

Life and Nature, Past and Present

NEW ENGLAND is nearer Europe than any other section of our country. Its shores were those first visited by people from northern Europe, and, after colonization began, settlements multiplied rapidly. It was named by Captain John Smith, who

came across the Atlantic with two ships in 1614 and explored the coast from the Penobscot to Cape Cod.

The region is halfway between the equator and the north pole, and, though the winters are severe, the summers are warm enough for the growth of a great variety of grains, fruits, and vegetables. It is not so far north that its harbors are closed by ice in winter, nor so far south that the climate lessens the energy of its people. Persons with weak constitutions find the climate too harsh, but it helps those who are naturally robust to develop a desirable vigor of body and mind.

A deserted home among the hills

New England is more than four hundred miles long north and south, and often the southern lowlands are bare when the forested uplands on the Canadian border are buried deep in snow. The winter weather is very changeable. A southeast wind from the Gulf Stream is likely to bring a winter rain, but such a storm may be followed by a cold "northwester" with driving snow. Then, after the skies clear, the mercury may drop well below zero.

In the summer the prevailing winds are from the southwest, and the heat is frequently intense, except along the coast, where the sea breezes moderate it. Afternoon and evening thunderstorms are a feature of the warm months. These showers, though they often interrupt farm work and do more or less damage, supply needed moisture to the crops, and replenish the streams to the great benefit of the mills that depend on water power.

The climate was once much colder than it is now. In the northerly part of the continent the snow did

Apple blossom time

not melt in the spring, but accumulated and formed an immense sheet of ice. The ice extended across

Canada and covered the whole of New England. From the northern uplands it crept slowly southward in a vast glacier, and its front edge was where the climate was warm enough to melt it away as fast as it pushed along.

The melting ice kept depositing boulders and lesser stones of various sizes, and pebbles and gravel. Many hills in the southeastern part of New England were formed in that way, and some of the neighboring islands.

We are indebted to that ancient glacier for most of our numerous lakes and ponds, for, as the ice passed over the rock, it ground away that which was soft faster than that which was hard, and so formed basins large and small. Most of these basins have since been filled with sediment, but many of them are now occupied by lakes. Other lakes were formed in valleys that had been dammed by glacial drift.

When the climate gradually became warmer the borders of the ice sheet receded, and the drift rubbish that it deposited is found over a large part of New England. The scattered boulders are often entirely unlike any local rock, and we have to go to the distant north to discover their starting point.

Nearly all of New England's early villages were distributed along the coast and the fertile valley of the Connecticut, where they could communicate with each other by water. Scarcely had the settlements begun to push up the other valleys when this expansion was

checked by the bloody struggle of King Philip's War. Afterward attacks by the French and Indians from the north made it dangerous to extend the frontiers until Canada was conquered by the English in 1759.

New England life changed slowly for two centuries. The families that gathered before the big fireplaces were large, and the children, when they grew up and married, moved on and took up new land. They cleared the forest, piled the boulders that encumbered the soil into stone walls, and produced on their farms the necessaries of life, including grain and meat.

A glacial boulder in New Hampshire

Roads were poor and travel difficult, and each community depended largely on itself. The farmer built his own house, and raised wool and flax, which the women spun and wove into cloth and made into wearing apparel. Indeed, most of the things which now would be bought in the stores the rustic household contrived to supply themselves or did without.

The earlier settlers built their houses in village groups that they might better protect themselves from

A kitchen fireplace which was in everyday use until 1900

the savages and the wild animals of the wilderness. Later the tendency grew to dwell on scattered farmsteads.

Population showed little tendency to concentrate in large towns. At the beginning of the nineteenth century Boston had only twenty-five thousand people, Providence had less than eight thousand, Hartford five thousand, Portland four thousand, and most other places that have since become populous cities were either country villages or did not exist at all.

When the settlements had flowed over New England's

uplands the people began to be attracted westward by the greater fertility of the lands in New York and beyond. Trade and commerce assumed increased importance, and more and more young men left the farms to seek their fortunes in the growing seaport towns. These towns waxed rich on the profits of their traffic. Their vessels went after fish, or made long voyages across the seas, carrying the surplus products of their own land and bringing back manufactured goods and tropical products.

New England's numerous good harbors have always been a valuable commercial asset, and all its states have a considerable length of coast in proportion to their size, except New Hampshire, which has only eighteen miles, and Vermont, which lies wholly inland.

None of the six states is large. Even Maine, which is nearly as big as all the other five put together, exceeds in size only four states outside of New England. Any one of nineteen states beyond the Mississippi is larger than the entire New England group. Texas is four times as large. It would take two hundred and fifty Rhode Islands to make Texas.

But though New England is only about one fiftieth of the area of the United States, and though it has no important gold, silver, or iron mines, nor any extensive coal deposits, nor much rich farm land, it has a fifteenth of the nation's total population. It has a still larger proportion of the national wealth, and the people live better than those in almost any other part

of the world. This prosperity is largely due to manufacturing.

In colonial days New England had very few mills except those where logs were sawed and grain was ground, but afterward other mills increased rapidly in number and size and drew more and more people to them. At first the workers came from New England's own farm uplands, but later great numbers flocked in from foreign countries. The numerous rivers that make a rapid descent from the hills and mountains furnish an abundance of cheap power. When there is a good fall, even a small river is capable of doing the work of hundreds of horses.

Dams were built, and the water led around the falls in canals to turn the wheels of the mills that were erected beside these artificial waterways. At the more important falls great manufacturing towns have grown up. Their mills do not depend altogether on water power now. Steam made by burning coal is also largely used. Nearly all the coal has to be brought from distant mines, yet New England mills and workers are so highly developed that the region continues to be a great centre for manufacturing all those wares in which the chief essentials of production are skilled labor and mechanical genius.

As a farming region New England is a good deal handicapped. Much of it is mountainous or stony, and the only very fertile portions are in the river valleys and along the coast. A large part of Maine is wilder-

ness and swamps. The farms fall far short of producing enough to feed the people, and the great food staples, such as wheat, corn, and oats, are largely brought from the West.

None of the states raises wheat except Maine and Vermont, and in those the amount is small. Corn and oats are both important New England crops, and Connecticut and Massachusetts have good-sized tobacco-growing sections. Apples and other fruits are largely cultivated, and market gardening is done on a generous

Water power on a typical New England stream

scale near the cities. Dairying is a great industry. So much milk is needed in the big cities that it is sometimes carried on trains that convey nothing else

but milk cans from far out in the country. A great deal of milk is used also in making butter and cheese.

There has long been a decreasing population in the upland towns. This dates back to the building of railroads and to the great development of manufacturing that began somewhat earlier. Traffic and trade and invention increased the social attraction of the large towns as compared with that of the country hamlets and lonely farms. Besides, mowing machines and other agricultural machines began to be used. These were ill-adapted for work on the rocky, uneven upland, and remoteness from railways or markets there made it difficult to dispose of crops. Farm life under such circumstances returned so little in pleasure or profit that it could not keep the young people from drifting away to the towns, and deserted houses going to ruin, and neglected farmlands growing up to woods have been common everywhere among the New England hills. Often the only trace of the old homes is some ruinous stone wall, a half-filled cellar hole and chimney heap, or a brush-grown family graveyard.

But on the whole farm conditions are improving. Methods of work are better, and the farmers are learning the needs of their soil, the scientific use of fertilizers, how to combat the pests that threaten their crops, and how to market their produce effectively. Most important of all, the social pleasures within reach of the rustic dwellers have become more varied.

The rural villages continue to be trading points for

the surrounding farms, and the country stores take eggs and butter in exchange for groceries, dry goods, tools, and other wares. Usually each farmer has a

A rustic village

garden and small orchard, and he produces hay and corn. He keeps at least one or two horses, a few cows, and a flock of hens. Some men have half a dozen kinds of domestic animals, and cultivate their land in small plots devoted to different sorts of crops. But the progressive farmers give their attention to a single product or class of products.

Shad fishermen near the mouth of the Connecticut

New England's Longest River

THE name of the Connecticut River is a combination of Indian words which mean "the river with the long tide." This descriptive phrase refers to the tidal rise and fall of the water as far as the Enfield Rapids above Hartford. The river's source is in the

primeval forest at the extreme northern point of New Hampshire near the top of the mountain ridge that forms the Canadian line. Here is a little lake of only a few acres which is more than twenty-five hundred feet above the sea level. This is known as Fourth Lake. Within about a dozen miles below are Third, Second, and First lakes, the last of which is also called Connecticut Lake; and all four are linked together by the infant river. The stream flows southward between Vermont and New Hamphshire and across Massachusetts and Connecticut till it reaches

A logman's houseboat on the upper river

Long Island Sound. Its entire length is four hundred and ten miles. It is the longest river in New England, and its valley is one of the fairest in America.

In the ancient valley of the river from northern Massachusetts to New Haven, where the stream formerly joined the Sound, marvellous fossil footprints have been found in the old layered rocks. The New England climate was much warmer in that remote period when these footprints were made in the water-side mud of what was then an inlet from the sea, and it seemed to favor the development of gigantic forms of life. Huge birds strode about that were four times as large as an ostrich, and some of them weighed nearly half a ton. There were strange frog-like creatures with feet twenty inches long, and many other curious animals large and small that have vanished from the earth. No bones of these ancient swamp and jungle dwellers have been found, and but for the footprints turned to stone we would not know that such creatures had lived in the Connecticut Valley of that far-off time.

Where the river's bordering lowlands are sufficiently broad and unobstructed by hills and rocks it forms long loops, and the channel is always gradually shifting. Sometimes the stream shortens its course by cutting across the neck of one of these "oxbows." Such a cut was made in 1840 just below Northampton. A farmer had ploughed a strip the previous fall from bank to bank on the neck, and in February a jam of ice in the bow set the water back so that it ran across the ploughed field. In a few hours it had torn a new channel. This caused great rejoicing in the towns

above, and at Northampton the bells were rung. The towns were three miles nearer tidewater, and, as the

A river oxbow viewed from Mount Holyoke in 1840

valley had as yet no railroad, the river was an important highway for commerce.

In the winter, ice bridges the river almost completely from source to mouth, but by the beginning of April the ice has usually been much weakened by the sun's increasing warmth. At the same time the snow on the northern mountains melts, and every little stream becomes a torrent and rushes down to the river to swell its current. Heavy rains often add to the volume of water, and the ice crumbles and is swept down the stream. The channel is likely to fill to the brim, the low ground that borders it is flooded, and the brown

meadows that lie higher have long lagoons in their hollows.

Sometimes the water rises so high that it invades villages and scattered dwellings, and it may carry off buildings, fences, and bridges. The greatest flood on record was that of 1862. It was caused entirely by melting snow in a spell of remarkably warm weather. Some of the riverside dwellers had lively times compelling their horses and cows to wade and swim to ground that was not submerged. The hens were taken to lofts, and the hay and grain and tools were cared for as well as possible.

While the men were working outdoors the women and children were cleaning the house cellars and first floors.

High water on the outskirts of Northampton

Canned fruits, and the pickled pork, and the potatoes and other vegetables were carried to the second story,

carpets had to be taken up, and furniture moved. Some of the houses were situated so low that the families in them were carried in boats to houses more favorably situated.

One of the most notable floods occurred in autumn. It was in October, 1869. For thirty-six hours the rain fell in sheets and streamed down the window-panes so that a person could hardly see out. Husking had begun, but much of the corn was still in the fields, and great quantities were swept away. The river was full of stalks and pumpkins and wreckage of all sorts. An organ factory and other buildings were overwhelmed, and after the waters receded many black-walnut boards from the organ works, boxes of boots and shoes, barrels of flour, and much else were found stranded along the banks. But nearly everything had been greatly damaged, if not ruined, by the muddy water.

The Indians were the river's earliest navigators. They paddled its winding length in their bark canoes and dugouts on fishing and hunting expeditions, or on forays against their enemies. Its first white explorer was Adrian Block, who visited it in 1614 in a small Dutch yacht, the *Onrust*, a name that means *Restless* in English. He went up the river until the Enfield Rapids prevented his going farther. Ten years later the Dutch had begun to make somewhat frequent trading voyages to the river.

All through the colonial period the Connecticut was an important highway for trade and war. At first no

large craft went beyond the head of tide-water sixty miles from the mouth. But soon a scow was contrived that with twelve men to pole it could pass up the Enfield Rapids, and then it could go on as far as the South Hadley Falls. These and certain of the other falls beyond were an effective barrier to navigation up-stream, though rafts and boats could come down some

A fall near Greenfield, Mass.

of them when conditions were favorable. Men became very expert in running the rapids in their flatboats.

As settlements pushed farther and farther up the river and the region grew more populous, roads were made around the unnavigable falls, so that goods brought by the flatboats could be transported on the oxcarts of the local farmers to the opposite end, and the voyage be continued on other boats.

The flatboats were generally provided with a large square mainsail and a topsail. When the wind was unfavorable the boats were propelled by poling. The poles were from twelve to twenty feet long and had a socket spike at the lower end. One spike-pole man on each side was sufficient for the smaller boats, but as many as three on a side were needed on the larger boats. The spiked end of the pole was thrust down to the river bottom, and the pole-man brought its upper end against his shoulder and walked along, shoving as he advanced. The captain stood at the stern and steered with a rudder on the larger boats, and a wide-bladed oar on the smaller ones. Cargoes of merchandise and the household goods of new settlers were brought up the river, and shingles, potash, and other products carried down. Passengers, too, were occasionally transported.

A canal around the South Hadley Falls was completed in 1795. This was the first canal in America for the improvement of river navigation. Its length was two and one half miles, much of the way through solid slate rock. Canals were made later around several of the other falls, and the river was a very busy thoroughfare. The landings along the shores became the favorite resorts for leisurely dwellers in their vicinity to see the boats come in.

Some of the later flatboats were seventy feet in length and fifteen feet across at the widest part. At the stern was a snug cabin, and the captain and crew lived on

board. The crews of the small boats boarded at waterside taverns and farmhouses. The boats usually

The outlet of the canal around Enfield Rapids

tied up to the bank at night, but might go on when the moon shone and the wind favored. Traffic on the river kept increasing until a railroad was built up the valley.

There were no bridges across the river until after the Revolution, and ferries were an important institution. Many of the early ferries had no larger craft than a canoe. If a mounted man wanted to cross, he sat at the back end of the canoe holding a leading rein, and let the horse swim along behind. A cart would either be towed over, or, if a stout skiff could be had, the cart

was taken to pieces so it could be loaded on the boat. At some ferries a raft was used. Later, flatboats became common, and such still go back and forth at the present day ferries. They are kept from floating down

A ferryboat. The ferryman is on the shore prying around the end of the boat to make a better landing for the load of hay

stream by a wire that slips through pulleys on the boat. The wire has its ends securely fastened on the banks, and it lies on the river bottom except as the passing boat brings it up.

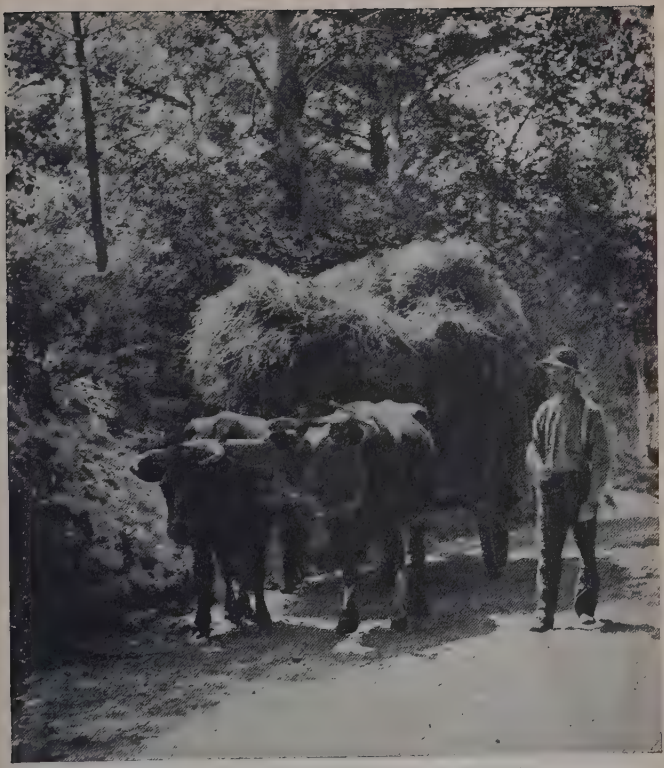
Fish formerly abounded in the river and were a valuable source of food supply. Shad went up the stream as far as Bellows Falls, and the salmon were such powerful swimmers that they ascended these falls and continued their journey still farther north. No salmon

come to the river now, and the shad only make their way up about fifty miles.

Men used to go out with boats into the rocky rapids at South Hadley, anchor, and catch shad with scoop-nets. When a boat was full it would be brought to land and the shad taken out. Then it would return for more. Two men would in this way sometimes secure three thousand shad in a single day.

Shad are no longer plentiful anywhere in the river, but quite a number of fishermen still seek them down toward the river's mouth.

Bellows Falls, which the shad were not able to get up



An oxcart load of hay on a Vermont highway

The Development of Travel

WHEN the first Europeans came across the sea there were no roads here. The Indians did not have wagons, horses, or cattle, and narrow footpaths, scarcely better than those made by the wild forest creatures, served all their needs. The only way that the

pioneers had of getting from place to place on the land was by these Indian trails. The moccasined feet of the savages hardly left a trace of their passage, but the heavy boots of the white men soon cut the soil into well-defined pathways. When new paths were made through the forests the settlers "blazed" the trees; that is, they slashed a piece of bark off from frequent tree trunks along the way, and the blazes stood out distinctly in the shadowy woodland and kept travellers from going astray.

There were no bridges. The colonists crossed the lesser rivers and brooks by wading, or perchance on a fallen tree. If accompanied by an Indian guide, the guide might do the wading and carry the white man "pick-a-back."

The earlier travellers journeyed with packs on their shoulders, but presently the trails were widened, and horses bore the burdens. Later the trails were broadened still more to enable carts to move along them.

The roads were gradually improved. Swamps and soft places were crossed by means of corduroy, which consisted of tree trunks cut in lengths to reach across the road and laid side by side in the mud. They were lightly covered with earth, but this soon washed off, and made a wagon's progress over the roadbed a continuous series of bumps.

Gravel roads were gradually introduced, and after a time plank roads. The latter afforded smooth and

comfortable riding when new. A famous trotting horse about 1850 made the wonderful time of "Two forty on a plank road," and this phrase became a common expression to indicate the acme of speed.

In recent years the state governments have done much in building improved roads. The road-bed is first laid out on gentle grades, and then crushed stone, coarse below and fine above, is put on and rolled hard. If such a road is properly cared for, and the spots that wear into hollows promptly mended, it is always in good condition both for rapid travel and for heavy loads. Unfortunately, the needful care is sometimes lacking, and the wear and tear occasioned by automobiles makes the upkeep of these roads very expensive. The first cost is also large.

It therefore seems doubtful if this type of road can become universal. A decidedly less costly road, and one that has some real advantages over the stone road in country districts, is the clay-gravel road. Clay and gravel mixed in the right proportions form a very firm road-bed that, if kept properly rounded, does not become muddy in the winter and spring thaws, nor does the summer traffic grind it into dust.

The most efficient machine for keeping a dirt road in good condition is a simple inexpensive contrivance known as the split log drag. If this is drawn over the highway just after a rain, it rounds the road up, smooths off ridges, fills depressions, and packs the earth down hard. A road thus treated is comparatively free from

A New Hampshire roadway. The name of the height in the background is Eagle Cliff

mud and dust, and there is real comfort in travelling on it.

Most country roads still receive only the rudest and most unscientific care. They are mended by scraping in waste from the gutters, with the result that the road is a morass of mud in spring and deep in dust in summer.

In January, 1673, the first mail on the American continent was despatched from New York to Boston by way of New Haven, Hartford, Springfield, and Worcester. The post-rider arrived in Boston a fortnight later, and after resting for a day or two he set off on his return

journey. He was expected to make the round trip once a month. The letters, papers, and small parcels which made up the mail were not so numerous but that he could carry them in his saddle-bags.

In 1704 a lady, who afterward became a Boston school-teacher, went over the route with the post-rider by way of Providence and New London. They mounted their horses and left Boston on Monday, October 2. Tuesday afternoon they came to a ford which she did not dare to ride through. So the post-man got a boy to take her across in a canoe, and he himself rode through the water and led her horse. Sometimes the highway was so narrow that the trees and bushes on either side gave them "very unpleasant embraces with their branches."

At one of the taverns where they stopped for the night, her apartment was only separated from the kitchen by a thin board partition, and for a long time she could get no sleep "because of the clamor of some town topers in the next room."

At the end of the colonial period men and women still made nearly all their journeys on horseback. The ladies often rode on pillions behind the men. Horse-blocks to aid them in mounting were common. Four-wheeled passenger carriages did not come into general use until the beginning of the next century. Even the two-wheeled chaises had not been known long, and were kept by their owners like their Sunday clothes, to be used only on special occasions.

After the Revolution mail was despatched from each end of the Boston and New York route to the other end thrice a week in summer and twice a week in winter. When the travelling was good the post-rider made the journey in six days.

A four-horse stage-coach

The mail for the smaller places was left in some tavern or store where every one could look it over. It consisted chiefly of newspapers. Letters were few. Villages off the main route were not likely to receive mail oftener than once a week. On post day, as it was called, half the inhabitants would assemble when the mail arrived at the village tavern. If the post-rider's visit was at midday, some one took him home to dinner, and while he ate he related, amid the silence of his auditors, the latest news and gossip gathered along the way.

Stage-coaches began to run between New York and

Boston in the summer of 1772. A coach starting from one of the places on Monday morning would arrive at the other on Saturday evening. The fare was threepence a mile. A single stage soon proved to be inadequate, and by 1802 a coach departed over the route daily from each end.

News could travel no faster than the stage-coaches, and when Washington died in 1799 at Mount Vernon on December 14, the news of his death did not reach Boston until ten days later. It took a month to get in all the returns of a state election in Massachusetts in those times.

The early stage-coach was a wagon, the body of which was a large oblong box with high sides. This box was on springs, and up above was a canvas or leather-covered top with side curtains which let down in cold or stormy weather. There were usually four seats, and these accommodated eleven persons besides the driver. The seats had no backs, and the rear one was preferred because there one could lean against the end of the wagon box. It was customary to let the women passengers occupy that seat.

Only fourteen pounds of baggage could be carried by each person free. It was placed under the seats. In the warmer months about forty miles a day were covered, but in winter rarely more than twenty-five.

Josiah Quincy, president of Harvard College, who went from Boston to New York by stage just after the close of the Revolution, says: "The carriages

were old and shackling and much of the harness of ropes. We reached our resting-place for the night, if no accident intervened, at ten o'clock, and, after a frugal supper, went to bed with a notice that we should be called at three."

Whether it snowed or rained, the traveller must make ready to start by the help of a candle or rude lantern. Sometimes the coachman would call out to the passengers to lean to one side or the other, so as to prevent the coach from toppling over when the wheels went into a rut. There were occasions when they had to alight and help lift the coach from a quagmire. Once, when the passengers of a coach rebelled at this requirement, the driver sat down by the roadside and calmly lit his pipe. They made anxious inquiries as to the meaning of his inaction, and he said, "Since those horses can't pull that carriage out of that mudhole and you won't help, I'm going to wait till the mudhole dries up."

The passengers concluded to alight and assist.

In the early years of the nineteenth century the stage-coaches were built with oval bodies suspended on stout bands of leather. There were three seats inside, each intended for three persons. The middle seat was a movable bench with a broad strip of leather to support the passengers' backs. The driver sat outside in front, and most of the baggage was carried on a rack behind. These coaches travelled six miles an hour on good roads.

In 1827 a Concord, New Hampshire, carriage-maker invented the Concord coach, which has never been excelled. It has a strong heavy body, and passengers can ride both inside and on its stout top. This is the kind of coach that transported the mails and treasure across the western plains and mountains, and it is still used in all parts of the world where there are no railroads.

Toward the end of the stage-coach period one hundred and eight lines ran out of Boston, and forty-two from Hartford.

In the less thickly settled parts of the country a stage wagon was used. This was a primitive uncovered vehicle usually drawn by two horses. Chairs sometimes served as seats, and there were not always enough to go round. A traveller writing in 1807 of a summer journey in Vermont from Burlington to St. Albans says: "I had a seat on the mail bag and other goods. The road in many parts was continually obstructed by large stones, stumps of trees, and fallen timber, deep ruts, and holes. I shall never forget the shaking, jolting, jumbling, and tossing over the road. We had only two poor jaded horses to drag us, which obliged me to alight and fag through the sand and dust, exposed to a burning sun."

America's earliest railroad was built in Quincy, Massachusetts, from the great granite quarries there to tide-water in the Neponset River, a distance of less than three miles. The cars were run by horse-power,

and the first trip was made in October, 1826. Wooden rails were used. They were laid on blocks of stone, and covered with strips of iron. A single horse could draw twenty tons of granite on one of the wagon-like cars.

The first locomotive trip in New England was made from Boston to Davis's tavern in Newton in March, 1834. By the end of the next year railroads from Boston to Lowell, Boston to Worcester, and Boston to Providence were in operation. The railroad reached Springfield from Worcester in 1839, and two years later had been built over the mountains to Albany.

On these early railroads the speed was about fifteen miles an hour, and the fare was three or four cents a mile. The first cars were Concord stage-coaches with the wheels altered to fit and stay on the rails, but soon long cars were substituted. They were coupled together like freight cars with no platforms nor entrances at the ends. The outside was commonly painted yellow. There was a running board and three doors on each side. The seats were arranged as now, except that they were in twos back to back and not reversible. They were covered with drab cloth and had loosely-hung bands of haircloth for backs. Each car accommodated twenty-four persons. The train was in charge of a "trainmaster," who carried a whip to keep boys from stealing a ride. Neither he nor the brakeman wore uniforms. The brakes were levers worked by hand.

People from all around came to see the trains when

they first began running. Here is a paragraph from a local paper that gives some idea of the excitement this new method of travel caused. It refers to the passing through Stamford, Connecticut, of the first New York and New Haven train on an autumn afternoon in 1849:

"The citizens of this village were nearly frightened out of their propriety by such a horrible scream as was never heard to issue from any other than a metallic throat. Animals of every description went careering around the fields, sniffing at the air in their terror; and bipeds of every size, condition, and color set off at a full run for the railroad depot. In a few moments the cause of the commotion appeared in the shape of a locomotive, puffing its steam and screaming with its so-called whistle at a terrible rate."

The first engine on the Boston and Albany road was the "Meteor," imported from England. This was soon followed by the Massachusetts-built engines, "Yankee," "Comet," and "Rocket." Some of the earlier cars and engines had only four wheels.

None of the engines had headlights. The freight engines were called "crabs." They had upright boilers, and on the front was the engineer's cab with curtains around the sides. The fireman was back of the boiler, and he had no shelter.

At first the cars were without springs, and their jarring motion was far from comfortable. Accidents were many, and often, when the locomotive broke down, the train had to be dragged by horses or oxen

to the nearest station and repair shop. Soon after Springfield had a railroad to the east and west, a freight train ran away and went right through the town roundhouse. Three men were killed. Behind the roundhouse were some big piles of cord wood, and that wood was scattered all about mingled with broken cars and freight and the wreckage of the building. A great many people flocked to the scene, and they wagged their heads and agreed that these railroads smashing around that way were a very doubtful blessing.

The road-bed of the early railways was made of whatever material came handiest, and it was streaked with all kinds of soils that had been dug through or dumped on. When the ground froze, the soils that held water would bulge and tilt the tracks about in all sorts of shapes. Later gravel was used because water would drain through it, and it was not affected by frost, nor was it very dusty. The finest road-beds now are made of broken stone.

The tracks were at first made of flat iron strips three fourths of an inch thick, spiked on wooden stringers. The spikes soon rattled loose, and on each engine was a man with a sledge hammer watching the track and ready to drive down any spike he saw sticking up. Another source of trouble lay in the tendency of the ends of the strap iron to curve up into what were called "snake heads." These sometimes pierced the bottoms of the cars and did great damage.

When the T rail was adopted the railroad managers

thought their troubles were at an end, and that little further care of the road-bed would be necessary. Grass was allowed to grow between the tracks, but the wheels crushed it on the rails and made them slippery, and the roots held water and rotted the ties. So steps had to be taken to keep the grass away from the neighborhood of both ties and rails.

Southern New England now has more railroads than any other section of the Union of similar size.

In 1835 a resident of Brandon, Vermont, built an electric motor, and with it operated a small model railway. Other experiments of the same sort were made later in Europe, but not until many years had passed was an electric railroad built for use. The first one in the United States was constructed in 1883. Since then the development of electric car lines has been very

A horse-car still used on Block Island in 1916

rapid, and latterly many powerful electric engines have been made to take the place of steam engines on some of the great railroad systems.

A Puritan maiden

Cape Cod

CAPE COD thrusts out into the sea like a man's bended arm with the fist clenched. It extends eastward thirty-five miles, then northerly thirty more, and has an average width of about six miles. In the interior the land rises to a height of two or three hun-

dred feet. The Cape is composed almost entirely of sand, not only on the surface, but to a great depth. A thin layer of soil overlays the sand, but there are many holes and ruts in this weather-beaten garment, and at the extremity of the Cape the sand is entirely bare.

Bartholomew Gosnold, who landed on the Cape in 1602, gave it its present name because of the great number of codfish he found in the adjacent waters. Various other names were bestowed on it, but none held except Gosnold's; and this, as the famous old Boston parson, Cotton Mather, has said, "it will never lose till shoals of codfish be seen swimming on its highest hills."

Trees do not flourish on the Cape, and such woodlands as exist are apt to be fire-ravaged, and so thin that you can see the horizon through them. Oak trees twenty-five years old are often a mere scraggy shrubbery nine or ten feet high, and a person can reach to the topmost leaf of many of them. Much that is called woods is about half as high as this, and consists of patches of scrub oak, bayberry, beach plum, and wild roses, overrun with woodbine. When the roses are in bloom, the profusion of blossoms, which mingle their perfume with the aroma of the bayberry, makes these patches very delightful. They are like oases in a desert.

The soil is not so infertile as it appears, and there are some real advantages in its lightness and freedom from stones. A book printed in 1802, speaking of this land

for raising corn, says, "A plough passes through it speedily, and after the corn has come up, a small Cape horse, somewhat larger than a goat, will, with the assistance of two boys, easily hoe three or four acres in a day."

Many of the old farmers, however, understood ploughing the sea better than ploughing the land, and they did not disturb their sands much. Some of the land was not considered worth writing a deed for.

One Cape crop which is known far and wide is cranberries. Thousands of families in all parts of the country have Cape Cod cranberries served with their roast turkey every Thanksgiving Day.

The land devoted to raising these tart bright-colored berries was originally "fit for nothing but to hold the world together." Much of it, with the crop growing on it, is worth a thousand dollars an acre. The cranberry vines require a great deal of water, and the unsightly and apparently worthless bogs are best adapted for their culture. A marsh is selected where running water can be obtained, and after it has been cleared of bushes, stumps, and roots, the ground is made as level as a floor. The rich bog soil is then covered with sand several inches deep to prevent the easy growth of weeds. Here and there ditches are dug across it, and it is encircled with a ridge of earth.

During the winter the marsh is kept flooded to guard the plants from the frost and kill insect eggs. Often it is necessary to raise the water in the ditches while

the berries are ripening so that the roots embedded in rich peaty soil will be kept moist at the same time that the sand above is dry.

The plants, when full-grown, cover the soil with a thick mat of vines, which in the early autumn are twinkled all over with ripe berries. Picking begins in mid-September, and lasts until the end of the month following. School keeps much of the summer in the cranberry districts, and there is a long autumn vacation to enable the children to help in the berry bogs.

During the picking season all the energies of the people are directed to harvesting the berries. Dwellings are closed from morning till night. Cooking is done in the evening or on rainy days, and in fair weather every one is on the marshes all the hours of daylight. The pickers wear their oldest clothes, and the women draw stocking-legs over their arms as a defence against briers.

If the weather threatens to be frosty, while the berries are still unpicked, brush fires are made at night along the edge of the bog. The fires are not expected to warm the air much, but they make a smoke, which settles over the level hollow of the marsh and serves as a protecting blanket.

Houses on the Cape are usually low and small, and many of them have shingled sides. The older ones often have a surprising number of various-sized windows in their gables. There are apparently windows for

the grown folks and windows for the children — three or four apiece; just as a certain man had a large hole cut in his barn door for the cat to pass through and a smaller one for the kittens.

Every town had its windmill before the days of railroads. The mill was a gray octagonal tower with a long timber in the rear slanting down to the ground where it entered the hub of a cartwheel. This timber served in some measure as a prop against the onset of the winds, but its main purpose was to enable a man, by rolling the cartwheel along, to turn the fans of the mill to face the breeze. A great circular rut was worn around the building by the wheel. These mills were set on high ground and served as landmarks, for there were no tall trees nor other objects that could be seen so distinctly on a far-off horizon, unless it was the meeting-houses, which also were commonly on an elevation.

The Cape lies very open to the winds, and the buffeting of the fierce sea gales is evident in the upheave of the sand dunes and the landward tilt of the exposed trees. These trees have a very human look of fear, and seem to be trying to flee from the persecuting storms, but to be retarded by laggard feet.

The outer side of the Cape presents a desolate succession of scrubby hills and hollows with rarely any cultivated land in sight, and the villages are for the most part on the low-lying and more protected inner side. On this side the water is often as smooth and

quiet as a pond, but the sea is never at rest on the other shore.

There is an almost straight beach twenty-five miles long fronting the Atlantic, extending north from the

On Cape Cod's inner shore. The boat is a fisherman's dory

elbow of the Cape. Thoreau, the famous nature writer, once started at the southern end of this beach and walked the entire distance. He tells how every wave sent the foam running up the hard wet sand, sometimes making him beat a hasty retreat when a billow was unusually forceful. The sea was dark and stormy, and the breakers rushing to the shore looked like droves of a thousand wild horses with their white manes streaming far behind, and the long kelpweed that was tossed up from time to time suggested the tails of sea-cows sporting in the brine.

The early settlers waged war against blackbirds and crows to protect their corn, and against wolves and foxes that were prone to prey on the domestic animals, and they dug clams, fished with line and net, and watched from their lookouts for off-shore whales.

Digging clams at low tide

In many respects conditions are still the same. The sea is very near on both sides, and the people continue to be largely dependent on it for a living. It even furnishes a good many of them with all the wood they burn, for every landward gale strews the beach with wreckage and drift rubbish, some of which has value for building purposes. Clams can be dug easily along shore, and, if a man chooses to go out in a boat, he can rake up quahaugs, a kind of deep-water clam, or he can catch fish.

One of the most exciting events to the dwellers of a waterside village is the arrival of a school of black-

fish, a species of whale which attains a length of fifteen or twenty feet and a weight of a ton. When these fish are sighted leaping along at the surface of the sea, the men and boys run to the beach, jump into their boats, and row out to get on the seaward side of them. If they succeed in doing that, they turn toward the shore and strike on the sides of their boats and blow horns to drive the fish in to the beach. As soon as the fish are stranded their pursuers leap out and lance them, and tie ropes to their tails to keep the tide from carrying them away. After the receding water has left the bodies on the land the blubber is cut off. Kettles are brought to the shore, fires are made under them, and the blubber is boiled for the oil. In one of these blackfish drives over fourteen hundred were captured.

The nearness of the sea has played its part in enticing a large proportion of the Cape Cod men to a life of voyaging; and, when the voyagers return and tell their adventures to the young people at home, an eager desire is aroused in their hearers to seek fortunes on the water. Not all who embark come back. At Truro, near the end of the Cape, is a monument in the graveyard that bears this inscription:

SACRED TO THE MEMORY OF 57 CITIZENS OF TRURO WHO WERE LOST IN SEVEN VESSELS WHICH FOUNDERED AT SEA IN THE MEMORABLE GALE OF OCT. 3, 1841.

Their homes were all within a circuit of two miles. They were lost in fishing vessels, but the surviving inhabitants went a-fishing the next year as usual.

On the bleak Atlantic shore of the town stands one of the most important of the Cape lighthouses. The Cape, with its shoals and fogs, is a region of great peril to vessels, especially for sailing boats and barges in winter and, in spite of the gleaming warning of Highland Light, many a good vessel goes ashore on the coast. The place used to be called Dangerfield. This was a very appropriate name.

Where the Cape joins the mainland Buzzards Bay makes a deep indentation from the south, and as early as 1627 the advantages of a canal here were recognized. Various surveys were made as time went on, and excavating was started twice by companies that afterward abandoned the enterprise. The company which finally made the canal began digging in 1909.

During the five years that it was being completed, there was an annual average of thirty-five ship disasters and twelve lives lost on the Cape coast. The canal shortens the voyage from Boston to New York about seventy miles and enables vessels to avoid a considerable stretch of exposed and stormy water. It traverses low salt marshes in part, and the land at its highest point is only twenty-nine feet above the sea-level. The length is eight miles, the depth twenty-five feet, the width at the bottom one hundred feet. It is lighted from end to end with electricity so that

passage can be made night or day. The cost was twelve million dollars.

The oldest town on the Cape is Yarmouth, settled in 1639. Its men have been famous sea-faring folk, and in the days of the sailing-vessels they voyaged the world over. The majority became ship's officers, and a goodly number of them amassed wealth in the India and China trade. Nearly every other house in town used to be the home of a retired sea-captain.

Provincetown, at the jumping-off tip of the Cape, has an ancient old-world look due to its narrow streets with houses, stores, and little shops crowded close along the walks. The place is odorous of the sea, and the waterside is lined with gray fish-shanties and storehouses.

Back of Provincetown is a desert of sand dunes. These drifting sandhills have encountered patches of woodland in places, and covered the trees to their very tops. So lonely and desolate is the region that few people visit it, and there are natives of the town of mature years who have never crossed it to the other shore, less than three miles distant.

The sand drifts like snow, and the Provincetown houses were formerly built on piles in order that the driving sand might pass under them. A traveller in 1849 was told that the young ladies had a dexterous way of emptying their shoes at each step.

It is stated in an old history that wheeled vehicles were such a rarity in the place that "A lad who under-

stood navigating the ocean much better than land travel, on seeing a man driving a wagon in the street, expressed surprise at his being able to drive so straight without the assistance of a rudder."

Beach grass has been planted by the government on some of the dunes to hold the sand in place. This grass

Provincetown at the tip end of Cape Cod

has an affiliation for sand, and you can stick one of its coarse wiry tufts in anywhere, and it will grow. If the grass is methodically planted the shifting dunes are fast bound so that the winds assail them in vain.

It is an interesting fact that Cape Cod was the first land the Pilgrims saw after a voyage of more than nine weeks from England. On Saturday, November 21, 1620, the *Mayflower* cast anchor in Provincetown harbor. A party went ashore that same day for wood

and fresh water, and on Monday some of the women landed to wash clothes.

Wednesday, sixteen of the men under Miles Standish set off to explore the country and were gone two days. They saw at a distance five or six natives and a dog, and they found several heaps of corn buried in the ground. When they returned, two of them bore a basket of the corn slung on a staff, and another of them brought the noose of an Indian deer trap that had caught him by the leg.

About a fortnight later a second exploring party was gone for three days. They shot a number of geese and ducks, discovered some Indian graves, two empty wigwams, and more corn, ten bushels of which they brought away for planting. The next year, when several of them again visited the Cape, they sought out the owners of the corn and paid for what they had taken.

One tragic incident of the *Mayflower's* stay at Provincetown was the falling overboard and drowning of the wife of William Bradford.

While the vessel still lay in the harbor Peregrine White was born. He was called Peregrine to commemorate the fact that the Pilgrims were still on their peregrinations, or travels. The General Court later honored this first English baby born in New England by giving him two hundred acres of land. He grew up to be a man of ability and lived to the age of eighty-four, " vigorous and comely to the last."

Plymouth Rock and its protecting canopy

Plymouth and the Pilgrims

IN December, 1620, a party left the *Mayflower*, which was at Provincetown, and set out in the ship's shallop to explore the inner coast of Cape Cod. The shallop was a small vessel equipped with a mast and oars, and the party consisted of twelve Pilgrims and

six of the ship's crew. In the afternoon of the third day of their voyage a sudden storm of snow and rain came on them, the sea grew dangerously rough, and their rudder broke. Afterward it was all that two men could do to steer with oars. To add to their troubles the mast snapped off, and the sail went overboard.

They narrowly escaped being wrecked, but at last, when the short winter day had come to an end and darkness was about them, they found refuge in Plymouth Bay and anchored under shelter of an island. They went on shore and with considerable difficulty started a fire. It was midnight before they could settle down with any comfort. The next day was spent in drying their clothing and goods, fixing their guns, resting, and giving God "thanks for their many deliverances." On the day following they kept "their Christian Sabbath."

Monday, the twenty-first, they resumed their voyaging and crossed the bay to the mainland. There they observed a great boulder, partly on the shore and partly in the water, at the foot of a steep sandy hill. It was the only rock on the wild shore for a long distance, and it offered the voyagers a very welcome landing place, for they would be able to step out on it from their big clumsy boat without wading through the icy shallows. The coast here is sandy and without cliffs, and the presence of this solitary rock seems something of a mystery. Geologists say it was brought thither from the far north in the ice epoch by a mighty glacier.

The landing of the Pilgrims on this rock is one of our treasured legends, and yet no rock is mentioned in any of the early accounts of what occurred at Plymouth. Over a century had passed when a man ninety-four years old, who lived in the neighboring farm country, related that when he was a boy his father had told him the Pilgrims landed on the rock.

At one time it served as a stepping stone at the door of a Plymouth warehouse. In 1774 an endeavor was made to remove it to the Town Square, but in trying to pry it out of the ground it was split. The upper portion was put on a sledge, and there was much huzzahing as twenty oxen dragged it up to the Square. There it was deposited at the foot of a liberty-pole on which flew a flag inscribed "Liberty or Death." Not until nearly a hundred years later was it taken back to be rejoined to the rest of the boulder.

The boulder is now under an ornamental canopy of stone, and is protected from the ravages of relic hunters by iron gratings. But there are gates which are unlocked for visitors to allow access to the rock. Nearly every one wants to touch it, and now and then a woman will bend down and kiss it or make a child do so.

The exploring party that landed from the *Mayflower's* shallop found springs of excellent water, and a clear brook which was broad enough at its mouth to afford a harbor for their boats. Nearly all the local Indians had recently died of an epidemic, and there were deserted fields on the high ground where they had raised corn.

The explorers returned to the *Mayflower* and recommended this spot for a settlement, and the little vessel sailed over to Plymouth Bay. For a time most of the Pilgrims continued to dwell on her, and not until January 31 did they all disembark. April had come before the *Mayflower* sailed back to England.

The first undertaking of the Pilgrims when, in midwinter, they started their settlement, was to build a large cabin for their common shelter. They finished it in about three weeks. It had hewn log walls and was twenty feet square. Twice, before the winter was over, the thatched roof caught on fire from sparks out of the chimney and was burned, leaving only the frame timbers, but each time the thatch was soon renewed.

The pond which Francis Billington mistook for a great sea

By spring seven separate family log huts were completed. They were very small and rude, and were all alike. Oiled paper served instead of glass in the little window openings.

Soon after the Pilgrims landed, Francis Billington climbed to the top of a tree and discovered a broad pond about two miles from the settlement. He mis-

took it for a great sea, and it has been called Billington Sea ever since.

While John Goodman and Peter Brown were cutting coarse grass and flags for thatch one winter day, they saw a deer and pursued it with the result that they got lost. They had no food, and all night they walked back and forth under a tree to keep from freezing. The weather was very cold; and they were in great fear of wolves which they heard howling. It was late the next afternoon when they found their way back to the settlement.

Several times during the first month the settlers saw in the distance smoke and fires which could have been made only by Indians, and on three occasions some of the natives themselves were seen. In April, while a council was being held, an Indian named Squanto walked in and accosted the gathering in English. He was chief of a tribe living in Maine, where he had met many English fishermen, and one of their captains had carried him off across the ocean. Another captain brought him back and left him on Cape Cod. The Pilgrims were suffering for lack of food, and when Squanto saw their plight he went to catch eels for them, and he showed them where to fish. Through him a treaty of peace was made with Massasoit, the Indian sagamore of that region.

There was much sickness among the settlers, and half the little band died the first winter. So fearful of the Indians were the survivors that in the spring

they mournfully sowed a field of grain over the spot where the dead had been buried to prevent the savages from discovering the weakness of the settlement by counting the graves.

The corn which they had found at various times and places had been carefully kept for seed, and the Indian, Squanto, taught them to plant it when the new oak leaves were the size of a mouse's ear, and to place three herring in each hill with the seed for fertilizer. This Indian helped them and lived with them the rest of his life.

A Pilgrim maiden on the beach

In May the first wedding in the Pilgrim band took place when Edward Winslow married Susannah White. He had lost his wife in March, and she had lost her husband in February.

One of the notable men of the colony was Miles

Standish. He was so short of stature that a neighbor in a moment of anger called him "Captain Shrimp." But, though undersized, he was robust, active, and daring, and he was an experienced soldier. When arrayed for a warlike enterprise he wore a cloth garment which was thickly interwoven with wire, a breastplate, and a helmet. His wife died soon after arriving at Plymouth, and the captain presently decided to court Priscilla Mullins. In accord with the custom of the times, he sent a messenger to ask Mr. Mullins's permission to visit his daughter. The messenger was a young man named John Alden who was living in the captain's house.

Alden went to Mr. Mullins with his request, and found that he had no objection to the captain's courting Priscilla provided she was willing. So Mr. Mullins sought the young lady and sent her in to confer with Alden. The messenger arose and courteously told his errand. When he finished, Miss Mullins, after a pause, fixed her eyes on him and said, "Prithee, John, why don't you speak for yourself?"

He blushed and bowed and left the house, but soon came on another visit and spoke for himself so effectively that their wedding followed in a short time. The two have had many distinguished descendants, among whom are the poets Bryant and Longfellow.

The first duel in New England was fought in June, 1621, with sword and dagger, by two Plymouth servants. Both were wounded.

Two of the Pilgrims, with Squanto to guide them, went about forty miles to Swansea that summer to visit Massasoit. They presented him with a suit of clothes and some other articles. The few of his tribe who had escaped the plague were destitute and dirty.

In the autumn the colonists harvested their corn, laid in a store of fish, and shot waterfowl, turkeys, and deer.

One November morning the village sentry shouted, "Sail ho!" and the *Fortune* from England entered the bay. The settlers were ready with lumber, furs, and sassafras to the value of £500 to send back in her.

Shortly afterward the Narragansetts, a large and powerful tribe living in Rhode Island, sent a messenger to Plymouth "with a bundle of arrows tied about with a great snakeskin." This was a threat and a challenge, and the Pilgrims responded by returning the snakeskin with bullets in it. That served to quench the ardor of the Narragansetts for war. They would not receive the snakeskin and the menacing bullets, but sent them back.

As time went on other settlers came across the ocean to Plymouth, and at the end of four years it was a town of thirty-two houses. The dwellings were ranged along two streets, one of which ascended the hill from the shore of the bay, and was crossed by the other at right angles on the hillside. Where the streets met was the Town Square, on which stood four small cannon. The ends of the street were protected by

wooden gates which were fastened every night, and palisades enclosed the town.

The meeting-house was a large square flat-roofed blockhouse of thick sawn plank on what is now Burial Hill. It was also a fort, and six cannon were mounted on the roof. The people were called to service by the beating of a drum. During worship each man sat with his gun beside him, and a sentry was posted on the roof to keep a sharp lookout.

The dwellings were a single story high, or at most one story and an attic. Earth was banked up around the foundation for the sake of warmth. The chimneys were built on the outside. Some of the floors were simply of hard-trodden earth, and the rest were made of planks roughly hewn out with axes. Probably none of the houses had more than three or four rooms. Much of the tableware was wooden. Guns, powder-horns, bullet-pouches, and swords hung on the walls. The people now possessed many swine and poultry, a number of goats, and at least two dogs.

For food they depended in part on what they raised, and in part on the clams they got from the shore, the fish they caught in the sea, and the wild creatures they shot. When famine threatened in winter they dug groundnuts.

In 1623 they were in much distress of mind over a drought that began the third week of May. The weather was almost continuously hot, and when the middle of July arrived without rain the corn began to

wither. A day was set apart to pray for relief. It opened as clear and hot as usual, but toward evening

One of the old Plymouth streets

the sky began to be overcast, and soon "such sweet and gentle showers" fell as caused the Pilgrims to rejoice and bless God. That was the first New England Thanksgiving.

Plymouth long ago ceased to be a wilderness village, or even a rustic town. It is now a place of about ten thousand people, but it still retains an attractive savor of the olden times. Considerable manufacturing is carried on there, and it is a favorite summer resort. Something like fifty thousand people visit it every year.

One of the most interesting spots in the place is

Burial Hill. Here are the earliest marked graves. The oldest is that of a merchant who died in 1681. There are a number of very curious epitaphs. The following one refers to a Plymouth boy who died before he reached the age of two years:

"Heaven knows what a man he might have made. But we know he died a most rare boy."

Another inscription is this: "Here lies Interred The Body of Mrs. Sarah Spooner who deceased January ye 25th A.D. 1767. She was widow to ☞"

The hand points to the next stone, which marks the grave of her husband.

Here are two lines from the epitaph of Tabitha Plashet, written by herself:

"Adieu, vain world, I've seen enough of thee;
And I am careless what thou say'st of me."

She was a rather eccentric person who, after her husband's death in 1794, taught a private school for young children. She did her spinning in the schoolroom, as was the custom of the day. One of her punishments was to pass skeins of yarn under the arms of the little culprits and hang them on nails.

Historic Faneuil Hall, "The Cradle of Liberty"

Boston, Old and New

BOSTON Harbor cuts deeply into the coast, and is bordered by various irregular peninsulas. The most central of the peninsulas is the one which the heart of the present city occupies. This was originally about two miles long and one broad. Coves indented it on

all sides; there were hills and hollows, and several ponds and marshes. It has greatly changed in size and shape since then. Some of the hills have been entirely leveled, hollows have been filled, and land has been made where the coves and shallows along the shore used to be.

Boston's first white settler was a young English clergyman named Blackstone. He came about 1624, and built a cabin on the west slope of Beacon Hill. There he lived alone. He started an orchard and had a rose garden, and his house contained a small library he had brought across the Atlantic. Apparently he did not care to have near neighbors, for when the Puritans, led by Governor Winthrop, arrived he did not long delay moving, and established a new home in the Rhode Island wilderness.

Winthrop crossed the ocean in 1630, bringing nearly one thousand persons and a considerable number of horses and cattle in eleven ships. After stopping a few days at Salem, where a settlement had already been established, he sailed to Boston Harbor, and about the first of July landed at Charlestown. Here was a rude little village which had been started the previous year. The new-comers set up booths and tents and built cabins, but their provisions fell short, and there was much sickness. By the end of the hot summer nearly two hundred had died, and some of the others were so discouraged they went back to England in the returning ships.

Across the Charles River the settlers had the Boston peninsula in plain sight. They called it Trimountain or Tremont, a name suggested by its most prominent feature, which was a three-peaked hill near its centre. The springs at Charlestown were brackish, and, largely for the sake of a better water supply, most of Winthrop's colony moved across to Tremont in the autumn. Its name was soon changed to Boston in memory of an old town in England where some of them had lived. They called their colony the Massachusetts Bay Colony. Massachusetts was the name of a local tribe of Indians.

The settlers built houses along the shores of a cove that indented the land from the east nearly to where the Old State House now stands. The first winter was a hard one, and by the end of February food supplies had run so low that a fast day was appointed. The people were reduced to an almost exclusive diet of clams and groundnuts, and Governor Winthrop's last loaf of bread was in the oven. He had arranged to have one of the ships that brought them across the ocean get provisions and return. By this time it was so long overdue that they had concluded it had been captured by pirates, but now it arrived well stocked with provisions, and Boston celebrated its first Thanksgiving Day.

The narrow neck of land by which the peninsula was connected with the mainland was bleak and desolate, and exposed to the violence of the winter winds. It was no easy task for the inhabitants to keep a road

in repair there above high-water mark, and in some instances travellers on the neck barely escaped drowning.

The Bostonians erected first a fence across it, and later a fortification. There was a gate through which people passed back and forth. The gate was constantly guarded and was shut at a fixed hour in the evening. Indians were forbidden to enter the town with fire-arms or even sticks.

On the central hill's highest peak the settlers put a beacon. This was a tall stout pole with footsticks on the sides to enable a man to climb to the top, where an arm projected with an iron cage hung on it. The cage was filled with pitch and pine wood which were set on fire if a night alarm needed to be given. For a daytime alarm a flag was hoisted. The old three-peaked height has been much reduced by grading, and it now all goes under the name of Beacon Hill.

Boston's excellent harbor and central location caused it to develop early into the leading town in New England, politically and socially. At the end of its first century its waterside was edged with numerous docks and wharves, and back of these were winding streets and crooked alleys that followed the base of the hills or climbed the slopes at the easiest angle. The streets near the wharves were paved with cobblestones. Dwellings and shops were mostly of wood, and only one or two stories high, but varied much in color and the shape of their roofs.

The best known building in modern Boston is the State House. Wherever you go into the city suburbs, if the weather is clear and sunny, you can see from far away its big gilded dome gleaming on the top of Beacon Hill. In the State House the governor has his offices, and there the legislature meets every year to make laws. It stands on land that was formerly a part of the cow pasture of the wealthy merchant and patriot leader, John Hancock. The front, which is considered a fine example of the architecture of its day, was finished in 1798.

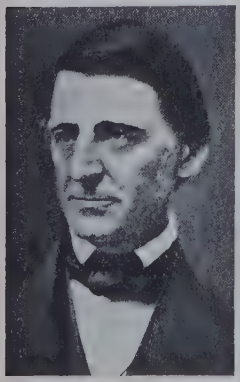
The Capitol on Beacon Hill

A book by Oliver Wendell Holmes, one of the famous literary men who have lived in the city, contains the statement that "Boston State House is the hub of the solar system." People said, "If that is so, then Boston itself must be the hub of the universe;" and the place has been known as "the Hub" ever since.

Boston has been noted as a centre of learning in our country almost from the first, and there are many great libraries and educational institutions in the city and neighboring places. It is famous for its publishers and

for the literary taste of its people, and its vicinity has been the dwelling place of a remarkable number of celebrated authors.

One of these was Francis Parkman, whom many consider the best of our American historians. He was born in Boston in 1823. Not long after he finished his college course he and a friend joined a tribe of the Dakotas, and spent several months beyond the Mississippi. They went as far west as the Rocky Mountains. His purpose was to acquaint himself with Indians who still lived primitively. That remarkably readable book of his for both old and young, "The Oregon Trail," is the record of his experiences. The hardships he endured on the trip made him a semi-invalid all the rest of his life.



Ralph Waldo Emerson

Another great American of Boston origin was Emerson, who was born there in 1803. When he was eight years old his father died, and the family was so poor that there were times when Ralph and his brother, Edward, had to share the use of one overcoat. Jeering school-fellows would ask, "Whose turn is it to wear the coat to-day?"

The State House fronts on a corner of Boston Common. The Common is a park of mild hills and hollows

forty acres in extent, shaded with noble old elm trees, which are the pride of all Bostonians. Formerly the water of the Charles River lapped its western borders, but now the shore of the Back Bay has been pushed more than a mile away to the northward. This tract of made land is larger than all of the original peninsula.

In the early days the Common was an almost treeless, rocky, and barren pasture. People used to get stones from it with which to make their cellar walls, and the cows grazed there until after 1820. Wild roses and bayberry bushes grew on the hillsides. It contained marshes and several shallow ponds and four hills. Only the largest of the four hills now remains. This formerly had a powder house on it.

One of the Common's important uses was as a parade ground for the militia. On the annual muster day all the train-bands of the country were there, and nearly all the townspeople, too. At such a time many booths and tents were set up along the borders for the sale of eatables and drinkables.

On the Beacon Street side there used to be a Wishing Stone. The young people would walk around it nine times, then stand on it, or sit down on it, and wish. Their wishes would come true if they did not tell any one what they had wished.

One of the most tragic incidents in the history of the Common occurred in the summer of 1728 when two young men fought a midnight duel on it. The elder was a bookseller's son. The younger, who was only

twenty, was the son of a clergyman. They quarrelled over cards at a tavern, and resorted to the Common, where they fought with swords. The younger fell, mortally wounded. The other took refuge on a frigate in the harbor which sailed at daybreak for France. There he died of grief within a year.

The Common had a gallows on it and was a place of public execution. Pirates have been hung there, and Quakers have suffered the death penalty for their faith. When the British troops were quartered in the town, at least one of them was shot on the Common by

"The Frog Pond" on Boston Common

a file of his comrades for deserting. All these victims lie somewhere beneath the sod there in unknown graves.

Near the centre of the Common is a stone-rimmed body of water known as the Frog Pond. The old-time

Boston boys used to slide down hill on to this pond, and they heaped up the snow to make a steeper descent. Just before the Revolution, the English soldiers who were camped on the Common destroyed the slides again and again while the boys were gone to school. The boys protested in vain to the soldiers, and then went to their general and complained. He asked who sent them.

"Nobody sent us, sir," one of them replied. "Your soldiers have spoiled our snow-slides and broken the ice where we skate. When we complained to them, they called us young rebels, and told us to help ourselves if we could. Now we will bear it no longer."

The general turned to an officer and exclaimed, "Good heavens! the very children draw in a love of liberty with the air they breathe."

Then he assured the boys that if any of the soldiers molested them again, they would be severely punished.

A short walk from the Frog Pond are several historic churches. One of these is the Park Street Church, whose slender spire overlooks the Common from "Brimstone Corner." In this church our national hymn "America" was first sung in 1832 as part of the program for the celebration of the Fourth of July.

Not much more than a stone's throw away is King's Chapel, where the British officials and loyalist gentry worshipped in colonial days. Close to each of these buildings is an ancient cemetery with its lowly gray stones. Some say that in the King's Chapel church-

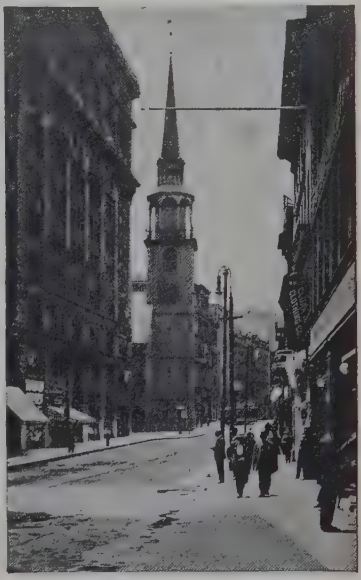
yard the notorious pirate, Captain Kidd, lies buried. Before his reputation became as black as it did later, he was employed by the colonial governor of New England and certain others to go on a voyage to catch pirates. After a while rumors came that he had himself turned pirate. However, in a few years he appeared in Boston and delivered to the governor the treasure he had acquired in capturing various ships. This included 1111 ounces of gold, 2353 ounces of silver, 57 bags of sugar, and 41 bales of goods.

Orders came from England for his arrest, and he was locked up in Boston Jail. This was in 1699. The prison was a gloomy building with thick stone walls, ponderous oaken doors, and dark passages; and the keys that the jailer carried at his girdle weighed from one to three pounds each. Captain Kidd was later sent to London, where he was tried and hung. How his body happens to be in King's Chapel churchyard is not explained, but the statement is made that if a person will visit his tomb there at midnight, tap on it three times, and ask in a whisper, "Captain Kidd, for what were you hung?" the pirate will answer nothing.

Another famous church in this vicinity is the Old South Meeting-house at the corner of Washington and Milk streets. It stands on what was once Governor Winthrop's garden. When the British were besieged in the town they turned the building into a riding-school. The furniture was cut to pieces and removed, and the floor covered with dirt and gravel. Deacon

Hubbard's beautiful carved pew, with its silk upholstery, was carried off by an officer to be made into a pigsty.

Just across Milk Street from this church there used to be a little two-story wooden dwelling which was the birthplace of Benjamin Franklin. He was the fifteenth of his father's seventeen children. An older brother was a printer, and Benjamin was apprenticed to him to learn the trade. But at the age of seventeen he secretly left home and made his way, partly by sea and partly by land, to Philadelphia, where he won fame and fortune.



The Old South Church

One of the quaintest of Boston's buildings is the Old State House at the head of what was King Street in colonial days. Here the pioneers built their first church. It was a small one-story building with plastered stone walls and a thatched roof. In King Street were located the stocks, pillory, and whipping-post. The children could look out of

the neighboring public schools and see the punishments inflicted, and there would usually be a curious crowd in the street gathered about the spot. Sometimes women were brought there from prison in a cage on a cart. Then they were tied to the red-painted whipping-post and given thirty or forty lashes on their backs. The pillory was on a platform, and when a man had his hands and head made fast in it he had to stand, scarcely able to move, exposed to insulting words, and perhaps pelted with rotten eggs and garbage. The stocks were about as bad, for, though the culprit sat down, his legs were gripped tight between two blocks of wood.

The Old State House at the head of what used to be King Street in colonial days. In the lower right-hand corner of the picture is the spot where the Boston Massacre occurred, March 5, 1770

It was just below the Old State House that the Boston Massacre occurred in 1770. The Bostonians were feeling a good deal irritated because two regiments of

British soldiers were quartered in the town, and about eight o'clock on the evening of March fifth a group of boys gathered around a British sentinel on the snow-covered King Street, and began taunting him. Presently he struck a barber's apprentice, who was one of the lads, a blow with his musket, and the boy went off crying.

About the same time a crowd, which had collected near the barracks on Brattle Street, got into a scuffle with the soldiers there. Then some men lifted a boy through a church window, and he rang the bell. The citizens in their homes thought this was an alarm of fire, and they came flocking forth with their fire buckets. As several of them were passing the sentinel in the square below the State House, the barber's apprentice came along and called out, "That man knocked me down with the butt end of his gun!"

The crowd then began to pelt the sentinel with snowballs, and the more aggressive shouted, "Kill him!"

Soon a captain with seven privates came to his rescue, and confronted the angry crowd of fifty or sixty unarmed men. The latter pressed up to the very muzzles of the guns, and they threw snow in the soldiers' faces, shouting, "Fire if you dare!" and "Come on, you lobster-backs!"

Suddenly some of the guns were discharged, instantly killing four men and wounding seven others, two of whom afterward died. The mob turned and fled, as all mobs are apt to do.

The drums beat now, and an entire regiment marched

into the street, and the whole town swarmed to the place. But after the soldiers concerned in the firing had been arrested, things quieted down. When the soldiers were tried all were acquitted except two, who were sentenced to be branded on the open hand.

A few streets northerly is Faneuil Hall, "the Cradle of Liberty," so called because in it the colonists held many public meetings when the struggle with the mother country was approaching. It has always been a combination of hall above and market below from the time that Peter Faneuil built and presented it to the town. About twenty years later, in 1763, the interior was destroyed by a fire, and the funds for rebuilding were supplied by a lottery.

The market gardeners, whose covered wagons laden with vegetables and fruit are arranged every week-day in orderly rows beside the great building, come from all the country around. Some are from places thirty-five miles away and have started at nightfall, or earlier on the previous day. They begin to arrive by midnight and keep coming until the day dawns. After getting their wagons into position and stabling their horses, the early comers drowse away the rest of the night in some comfortable corner. But when the darkness begins to pale they uncover their loads, and customers soon appear. The scene becomes more and more animated, until it is difficult to find one's way about among the carts and the eager bargainers.

At sunrise a gong strikes, and the great building

itself is opened to trade. There is a central walk through it lined with stalls in charge of white-frocked men.

As soon as the produce in the wagons that come in from the country has all been sold, the drivers start homeward, sometimes quite early, but, if trade has been slow, not until late in the day.

Boston's early settlers soon established at the north end of the peninsula a village which was quite distinct from the one near Beacon Hill. This is a crowded foreign section of the city now, and one portion of it is known as "Little Italy." Here still stands the Old North Meeting-house, famous for its connection with Paul Revere's Ride. On the evening of April 18, 1775, he left the town in a boat, and from the other shore of the Charles River watched until two signal lanterns displayed in its belfry informed him that the British troops in Boston were about to cross the river to make a night raid and capture the military stores at Concord.

A little distance from the old church, fronting on the waterside, is Copp's Hill, now graded down so that it is much lower and less steep than formerly. It had a windmill on its top in the early days. During the siege of Boston the British threw up a redoubt there with a parapet made of barrels filled with earth.

In this vicinity lived Mother Cary, the witch. Once, when rosemary was in great demand as a medicine for asthma, and none was to be had in the town, she is said to have made a trip to Bermuda and back in an

egg-shell in a single night to obtain a supply of the plant.

Another old woman of this part of the town had nine cats which she was in the habit of consulting to enable her to give information as to where stolen goods were secreted.

Bunker Hill Monument

Charlestown is now a part of Boston, and is connected by bridges with the peninsula. On one of its heights rises the granite shaft of Bunker Hill Monument, which commemorates the famous battle fought there. The corner-stone was laid by Lafayette in 1825, and Daniel Webster was the orator of the occasion, as he was also when the completion of the monument was celebrated in 1843. Inside of the shaft is a spiral stairway of two hundred and ninety-five stone steps, up which one can climb to the top. The material used in constructing the monument is granite from Quincy, and the cost was met by popular subscription. Roundabout are city streets solidly lined with buildings.

Aside from Bunker Hill, one of Charlestown's most notable claims to distinction is the fact that Samuel

Morse, the inventor of the telegraph, was born there in 1791. He became a leading American painter, but was interested in chemistry, and in 1832 began devising apparatus to send electric messages. Three years later he exhibited the telegraph, operating with half a mile of wire. After struggling along under serious privations for eight years more, he succeeded in getting an appropriation from Congress to build an experimental line between Washington and Baltimore. The number and character of the honors heaped on him in recognition of the value of his invention have probably never been equalled in the case of any other American.

Within a ten-mile circle drawn around Boston dwell half the inhabitants of the "Old Bay State," and they constitute one-fourth of the entire population of New England. Boston is an important manufacturing city. It is the greatest American market for leather and leather goods. As a wool market it is unsurpassed except by London, and wool is brought there in immense quantities from all over the world.

The older business part of the city is a maze of narrow crooked streets in which the stranger easily loses his way. These streets are said to follow the routes of the old lanes and cow paths that were made when the place was a country village.

In the adjacent region are many beautiful suburban towns. The finest of these is Brookline, which is a paradise of splendid estates. In the early days its

name was Muddy River, and the Boston merchants pastured their swine and cows there in the summer.

The city has suffered from various serious fires. In its first century it had a "great fire" about once in ten years on an average. But its most notable fire disaster occurred in November, 1872. The fire was

The Boston Public Library

started in the early morning by a spark snapped from a furnace in the business section. The horses of the fire department were sick with a distemper, which was a great handicap to the department's efficiency. Sixty-five acres were burned over, nearly eight hundred buildings were destroyed, there were thirteen deaths, and the property loss was seventy million dollars.

The city is an almost ideal seaport. It lies well back in a bay that is protected from the ocean storms by two long slender arms of the land, one reaching southward and the other northward, with a deep channel between. On the outer side of the northward-reaching peninsula is Nantasket Beach, the most popular of Boston's seashore resorts. When the white men came it was the playground of the savages. The Indians would erect a pole on the beach, and hang it with beaver skins; and the swarthy braves ran races and played football to win these trophies. Their wild shouts could be heard above the roar of the breakers.

Boston Light. Here was erected in 1716 the first American lighthouse. The present tower was built in 1783

The harbor is dotted with islands. One little island near the entrance is known as Nix's Mate, and on it

there used to be a gibbet especially for pirates. Most of them, after they had been hung, were buried on the island in the sand, but whenever a ringleader paid the penalty of his villainy here, he was left hanging in irons from the gibbet, so that sailors coming into port would see the skeleton and take warning.

The best-known episode in the harbor's history is that of the Boston Tea Party. The British government was trying to force the Americans to pay taxes on the tea that was imported. But the Americans insisted that they could not be taxed without their consent. Many of them stopped drinking the foreign tea, and they would not use any kind of goods manufactured in Britain on which a tax was collected. They dressed in American homespun, and drank only tea that was smuggled in from Holland, or that which was made of sage, sassafras roots, and other things from their own gardens and woodlands.

On December 16, 1773, seven thousand people gathered in and around the Old South Meeting-house to protest against the landing of the cargoes of three tea-laden ships which had recently arrived in the harbor and lay beside what is now the Liverpool Wharf. The meeting was still in session at five o'clock in the afternoon, and candles had been lighted. A last appeal was sent to the governor, and he refused to act.

Meanwhile one hundred men had smeared their faces with soot in a neighboring tavern, and befeathered themselves like savage warriors. Now they appeared

outside of the meeting-house and gave a tremendous war-whoop. The people at once poured forth and saw the Indians hurrying down Milk Street toward the harbor, brandishing hatchets and shouting as they ran along. The crowd followed.

It was a moonlit evening, and the Indians had no difficulty in seeing to get aboard the three vessels. They told the frightened captains and crews to go below and stay there, and the ships' people dared not disobey. So the marauders were left free to take off the hatches and get the tea-chests up out of the holds. Then they broke open the chests and threw them overboard, or emptied their contents into the harbor. The Indians and onlookers were orderly, and there was little noise except for the blows of the hatchets. By nine o'clock the work was done, and three hundred and forty-two chests of tea valued at one hundred thousand dollars had been destroyed. The Indians marched back to the town to the music of a fife.

There were only one or two incidents to mar the affair. A Charlestown man in the crowd on the wharf thought he would get some tea to carry home. So he went on board a ship and slyly stuffed as much as possible into his coat pockets and inside of the lining. An Indian named Hewes observed what he was doing, and as he was leaving the ship sprang forward and grabbed hold of his coat. The man made a jump and left his coat-tails behind him. Hewes called out to tell the people what the man had done, and every one

who could get near enough helped him along off the wharf with a kick. The next day his coat-tails were nailed to the whipping-post in Charlestown.

One of the old towns that has been annexed to Boston is Roxbury, so called because much of the land in it is rocky, and originally spelled Rocksbury. The rocks are a kind of conglomerate known as pudding-stone, for which Oliver Wendell Holmes accounts as follows:

"In Dorchester there lived a giant who had a wife and three children. On election day he locked them up and strode away, leaving them an election pudding to eat. They were very angry, and instead of eating their pudding,

> "They flung it over to Roxbury Hills,
> They flung it over the plain;
> And all over Milton and Dorchester too
> Great lumps of pudding the giants threw.

"Ages have passed away since, the lumps of pudding with the plums in them have turned to stone, and there they lie."

The town's first minister was John Eliot, "the Apostle of the Indians." He learned their language with the help of a young Pequot who had been taken prisoner, and presently was able to preach to them without an interpreter. He visited all the Indians in Massachusetts and Plymouth colonies and lived to see twenty-four of them fellow-preachers of the gospel. In one of his letters he says, "I have not been dry,

night or day, from the third day of the week to the sixth." At night he would pull off his boots and wring out his stockings, and in the morning put them on and continue his travels.

No other missionary had such an influence as he over the savages, and he did what he could to have them treated justly by the whites. For a long time he was engaged in translating the Bible into the Indian tongue.

Eliot occasionally preached to the Indians from a rocky pulpit in the local woods. This pulpit was on what became later the famous Brook Farm, where some of the most notable men and women in America once lived and cultivated the land and their brains. Often a party of them would resort to the woodland on a pleasant Sabbath afternoon in summer and address each other from Eliot's pulpit. It was canopied by a birch tree through which the cheerful sunbeams sifted.

People used to laugh at the spectacle of rustic philosophers hoeing out wisdom and potatoes at the same time, and the neighbors said that the Brook Farmers once raised five hundred tufts of burdock, mistaking them for cabbages.

The story is told, too, that on washing days the men were likely to be called on to hang out the clothes; and in the evening, when the company gathered for recreation and began to dance, the clothespins fell plentifully from the masculine pockets.

A quiet evening in Gloucester Harbor

The Fishermen

LONG before the interior of New England had been at all thoroughly explored there was a large fishing industry off its coast. Hundreds of vessels came across the Atlantic to these waters to fish every year even as early as 1600; and when settlers began to

establish themselves along the shore, they were fishermen as well as farmers. Indeed, many of the settlers measured their crops by pounds of fish and barrels of clams rather than by bushels of corn. It was chiefly the abundant supply of cod, mackerel, halibut, shad, salmon, and other fish in the ocean and the rivers that enabled the pioneers to escape starvation.

The numerous bays and inlets and streams furnished good spawning grounds, and the rocky coast and shallow adjacent waters were conducive to the growth of seaweed, among which the fishes found a plentiful supply of small animal food. The best-known portion of the coastal shallows is the Grand Banks of Newfoundland. On this ocean highland millions of dollars' worth of fish are caught every year. New England has over sixteen hundred fishing vessels, which employ twenty-two thousand men. Fish used to be abundant near the shore, and the fishermen could catch them by going out in small boats; but now it is necessary to seek them at a considerable distance, and the vessels used are large and staunch. Some of them voyage as far as Greenland and Iceland.

For three miles out from the shore fishing can be done only by boats of that nation to which the shore belongs. No Canadian nor European boats can fish within that limit off our coast, and none of our boats can fish inside of that limit on the coast of Nova Scotia or Newfoundland. Outside of this shore line the fishing is free to all nations alike.

Most of the fishing in the three-mile strip of water is done by single fishermen who dwell along the coast. Each man has his own dory and is out on the sea fishing every day when the weather permits. Very likely his home is simply a shanty with a little garden near it by the borders of a cove that serves as a harbor for his boat. Early in the morning, perhaps before dawn, he goes out in his boat, with a sail hoisted in the prow, if there is wind, or pulling at the oars if no breeze is stirring. He examines his lobster pots, nets, and trawls, takes whatever he has caught into the dory, and does such rebaiting as is necessary. Most of the fish caught by these men are sold fresh in the towns on or near the coast.

Gloucester has become the most important fishing port in New England. It has a deep and spacious harbor, and is conveniently near that great centre of trade and population, Boston. The fishermen have always been notably bold, vigorous, and intelligent, ready to face danger and the severest strain of toil. Through long and hard experience they become skilful seamen and shipmasters, and in our wars, when service on the sea was called for, these fishermen have proved of great value to their country.

The demand for fishermen to go on cruises from Gloucester far exceeds the local supply, and many of them are now from Nova Scotia, Newfoundland, and even from the Azores across the sea.

Fishing on the Banks is largely carried on by fast-

sailing well-equipped schooners. They carry fresh vegetables, frozen meats, and canned goods to eat, and the crew has the best of fare. It requires three or four months to lay in a cargo of cod. The decision as to just where a schooner shall fish depends a great deal on the depth of the water and the character of the bottom. By constant sounding with the lead line an expert captain gets to know the realm beneath the waters very thoroughly. The lead has a hollow at its lower extremity in which a little grease is inserted, so that a sample of the sea bottom may be secured. The story is told of a certain old Nantucket skipper who could invariably tell just where his vessel was by examining the soil his lead brought up. In order to perplex him his crew once put some garden loam from the home island in the cup of the lead, made a pretence of sounding, and then asked the skipper to name the position of the schooner. The old fisherman tasted the dirt on the lead — his favorite method of deter-

A fishing schooner on its way to the Grand Banks

mining its individuality — and suddenly exclaimed, "Nantucket's sunk, and here we are right over Ma'am Hackett's garden!"

As soon as a captain finds satisfactory fishing ground he drops anchor. If the fish are very numerous and hungry, the men may fish with hook and line from the deck of the schooner; but usually the dories are hoisted overboard, and, with two men in each, go out to set the trawls. Only the captain and cook remain on the vessel. A trawl is a line about a mile long from which a thousand hooks hang on shorter lines two or three feet in length. One man pulls at the oars, and the other baits the hooks and drops them over. At each end of the trawl is a big float, and these floats are marked with the vessel's name. They are anchored, and the line is lowered to the bottom. In fine weather the dories go out early every day to take up the trawls. A boat starts at one end of a trawl, and as fast as the men remove the fish from the hooks and put on fresh bait they throw the line overboard. This work has to be done with bare hands even in freezing weather.

When the boats return they are swung to the deck, and the fish are thrown into a bin. The cleaning and packing them in the hold are done after supper.

Fishing on the Banks continues all the year round. The region is chilly and foggy, and in winter its dreariness and danger are increased by frequent gales and snowstorms. If sky or sea show any hint of threatening weather while a schooner's crew is out, a recall signal is

hoisted. But sometimes the gale rises so suddenly that one or more of the dories to leeward fail to get back. The strong tides of the Banks and the shoal waters help to pile up the great combing seas, and not infrequently a dory with two dead bodies in it, or empty and perhaps tossed bottom up by the waves, is all that tells the story of a lost boat and its crew. When the schooner on which the lost men sailed returns to port, it enters the harbor with its flag at half-mast.

At times a large number of fishing vessels may anchor near each other on a favorable fishing ground. Perhaps a storm arises, and an anchor gives way so that a schooner drives before the gale against another, wrecking both of them. Or one of the swift steamships that cross the Banks on a voyage between America and Europe suddenly looms up out of a fog and crushes a schooner that happens to lie in its path.

As soon as the fish which a vessel has brought to port are unloaded the captain gets a check for them. A fourth of one per cent goes to the Widows' and Orphans' Fund, and three quarters of the balance is for the fishermen after expenses have been deducted. Captain and all share exactly alike in the division except the cook, who is given ten dollars extra because the success of the voyage depends more on him than on any one else. If he is not kept good-natured he will waste food and fresh water, and compel an early return to port.

The rest of the money is turned over to the owners of the vessel. They, however, give the captain from three to ten per cent of it.

A vessel usually lies in port only two or three days and then starts on another cruise. Some firms own dozens of vessels, but it is not the owners who go forth on them after fish. They equip the schooners with the necessary apparatus, and send them out one by one in charge of a captain who has selected a crew. It is for the interest of every man concerned to work efficiently to make a profitable voyage, and this fishing industry is a most satisfactory instance of coöperation

"Old Mother Ann," on Eastern Point, Cape Ann

between labor and capital. There are no strikes, and, in spite of hardship and danger, the profits and the

independence and excitement of the life offer inducements to engage in fishing which cannot be resisted.

Halibut are caught with hook and line or with trawls much as cod are, for both are fish that live at the sea bottom and cannot be taken with seines. Some of the halibut weigh several hundred pounds. Most of them are sold fresh, but a considerable amount of salted halibut is smoked by being hung for several days in smoke houses where fires of oak chips are burning.

Many of the schooners leave port well supplied with ice and bring back their fish packed in it. From the vessels the fish are transferred to cold storage plants and are sent away in refrigerator cars so that they are kept fresh for weeks or months. Nearly all of the cod, however, arrive from the fishing-grounds salted in the holds of the vessels. They are taken out, split, and put to soak in hogsheads of brine on the wharf. Later they are spread to dry on flakes, which are slatted benches that allow the air to reach both sides of the fish. The process requires about a week and reduces a five-pound fish to two pounds. After the fish have been thoroughly dried they will not spoil for a long time, and they are sent away to be sold as salted codfish; or the skin and bones are carefully removed, and the flesh is packed in boxes and marketed as boneless or shredded cod.

Another important food fish is the mackerel. They swim together near the surface in large schools of many thousands. The fishermen cruise about after them in

their swift two-masted schooners. When the lookout sights a good-sized school, the crew leap into the great seine boats and extend a net in front of the fish. Then they bring the ends together behind the school. The upper side of the net is supported by cork floats and the lower side is kept down by lead weights. The school may sink and escape, but all hands strain at a rope which passes through pulleys at the under edge of the net. Soon the net is pulled together into a great pocket, and the mackerel are entrapped. The schooner then comes alongside, and by means of dipnets the fish are taken on board.

The mackerel are pursued by larger fish, among which the swordfish and bluefish are the most valuable. They disappear in winter, and where they go is a mystery; but the next year they appear coming shoreward as the surface waters get warmer.

When a vessel goes after swordfish, the crew locate their prey by the dorsal fins, which appear above the surface as the fish swim along. The moment one of these fins is sighted the vessel starts in pursuit, and, when close enough, a man on a little platform at the prow harpoons the fish. Away the wounded creature goes, and men in dories follow and despatch it. Occasionally a swordfish turns on its pursuers and jabs its weapon through their boat. After that, they reach their vessel as best they can.

The *Pansy*, an old-time Salem merchantman

On the Massachusetts Coast

NEXT to Plymouth the oldest place in New England is Salem, "The Witch City." It was begun in 1626 by a little band of English farmers and fishermen, who moved to the spot from the bleak shores of Cape Ann. Two years later they were joined by Cap-

tain John Endicott and a hundred adventurers from England.

At first the place retained its Indian name of Naumkeag, and then the settlers called it Salem, which means peace. It was on a neck of land between two rivers, and the colonists crossed the streams in canoes that they made by hollowing out pine logs. The canoes were about two and a half feet broad and twenty feet long, and in them the settlers would sometimes go fowling as much as two leagues out to sea. Every household had one or two of these water-horses.

For a long time Salem ranked next to Boston as the largest and richest place in New England. It was a great seaport and a centre for the coast fisheries. At the age of fourteen the Salem boy of those days began sea life in the cabin of his father's vessel. In his twenties he was likely to become a captain, and a score of years later he retired to a stately mansion in his native place. Swarthy, tattooed sailors with gold rings in their ears were seen month after month unloading from the great Indiamen bales of merchandise fragrant with the spicy odors of far-away lands. Every voyage of these big ships had possibilities of perilous storms, and encounters with pirates and cannibals, and their going and coming were fraught with a spirit of mystery and adventure.

Later, when the Salem shipping had declined, some of the mariners still lingered about the waterside reeling off the saltiest salt tales of the town's grand old times,

accompanied by a shake of the head at the change, with good ships and warehouses rotting, and nothing but landlubbers about.

As shipping declined manufacturing came in, and a large business has developed in the making of cotton goods, machinery, shoes, and lumber products.

One of the most interesting of Salem's colonial relics is the little church built for Roger Williams, who came to the settlement to be its pastor when it was three years old. The size of the building, 17 by 20 feet, makes one somewhat doubtful of the familiar statement that everybody went to church in those times. It was not only a house of worship, but the place where the colonial government held some of its meetings, and the structure was also used for a watch-house. When a new meeting-house was erected the old one served for a schoolhouse.

Another building that all strangers wish to see is "The Witches' House." This was the residence of one of the judges before whom appeared for examination those poor creatures who were accused of being witches. Belief in witches was at that time quite common, and they were said to make frequent journeys along the coast riding on broomsticks. The delusion created more turmoil with more fatal results at Salem than anywhere else in the colonies, yet its tragic period there lasted only about six months in the year 1692. The excitement started in the minister's family in February. His two little girls acted strangely, and accused

an Indian woman who worked for the family of bewitching them; her husband accused others, and there was a great uproar in the place, which at that time had only seventeen hundred inhabitants. Every one became suspicious, and those whose words and ways were at all unusual were thought to be either afflicted by witches or to be witches themselves. When Bridget Bishop was being led through the streets to her trial past the meeting-house she gave a look toward the building, and immediately an invisible demon entered it, and there was a sound of tearing which made the people run in to learn the cause of the noise. They found that a board, which had been strongly nailed on, had been transported to another part of the building.

This Bridget Bishop was the first witch condemned. She was hung in June. The next month five witches were hung on one day, and the same number on a day in August, while in September a group of eight were hung together, and a well-to-do farmer, eighty-one years old, was put to death by placing heavy stones on his body. At the outskirts of the village was a hill with a bare rocky stretch of several acres on its summit, and there the scaffold was erected on which the witches were hung.

No more persons were executed after September, but early the next year many were tried and three were condemned to death. However, in May, these three were set free in a general delivery, together with about one hundred and fifty others accused of witchcraft.

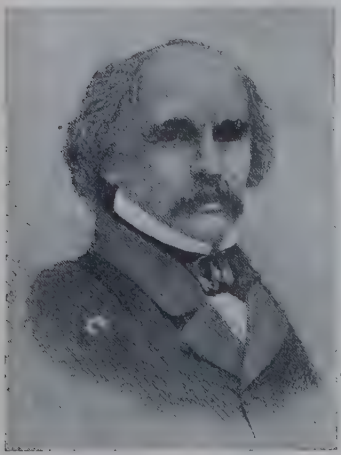
Salem is the native place of the great novelist, Nathaniel Hawthorne, and the house in which he was born in 1804 still stands. Not far from his birthplace is the House of the Seven Gables to which the family moved when the boy was four years old. His father had recently died at a distant port while on a voyage in the ship *Nabby*, of which he was captain. Hawthorne was so shy in his young manhood that he seldom went out except at twilight, or only to resort to the nearest solitude, which was usually the seashore. Even after he was famous some one writing of his appearance at public gatherings says, "He has the look all the time of a rogue who finds himself in a company of detectives."

The House of Seven Gables, where Hawthorne once lived, and which he immortalized in one of his most famous novels

For a time he was the collector of the port and labored daily at the custom house, and, though it was said that "he never could add up figgers," he on the whole performed well his uncongenial task.

Salem, like many another American city, has had its

great fire. This started in a leather factory early in the afternoon of June 25, 1914, after a long dry spell. So rapidly did the flames spread through the building that the men and women employed there barely escaped with their lives. Other buildings caught on fire, and help was summoned from a score of neighboring places. Buildings were dynamited to stop the flames, but the wind spread the embers, and when the fire was gotten under control late in the day, it had swept over two hundred and fifty-three acres, destroyed nearly fourteen hundred buildings, and left twenty thousand people homeless. Sixty persons were injured, several were burned to death, and others died from excitement.



Nathaniel Hawthorne

Only a few miles from Salem is Marblehead, on a bold headland that reaches out into the sea. It has an excellent harbor, and its inhabitants were fishermen for many generations. Life on the sea produces a hardy race and a peculiar one, and the old-time Marbleheader was recognized by his manner, gait, and speech, far beyond his home neighborhood. The houses closest

to the sea were severely plain and weather-beaten, and were jumbled together along lane-like streets. Other houses were built on or against the rocky ridges which extend through the thickly settled parts of the town. Some of these would run up the face of a rock two or three stories and have an extra story on top of the ledge, or would start with the front at a ledge-top and descend several stories down at the back. Often long flights of steps up a succession of terraces led to the

Marblehead's rocky shore

house door. Most of these picturesque buildings have disappeared since the town has changed from a fishing-place to a manufacturing centre and summer resort.

The only important outthrust of this northern coast is Cape Ann, which Captain John Smith named Tragabigzanda in honor of a Turkish lady whose slave he had been at Constantinople.

One of the most charming of the old coast towns is Newburyport, at the mouth of the Merrimack River.

Eagle Head and the shore at Manchester, where the waves make such music that this is called "The Singing Beach"

A very appropriate industry of the place is the manufacture of silver goods in colonial designs. The town has been the home of various notable men, but of them all "Lord" Timothy Dexter was the most picturesque. He was born in Malden in 1747, and as a young man was a prosperous leather-dresser in Charlestown.

Presently he bought a mansion in Newburyport, and after he had moved into it with his wife, son, and daughter, he adorned the roof with minarets sur-

mounted by a profusion of gilt balls, and painted the walls with gaudy colors. In front of the house he erected rows of columns fifteen feet or more high, and on each placed an image carved in wood. There were fully forty of the effigies, and they included Indian chiefs, generals, philosophers, politicians, and statesmen, with now and then a goddess of Fame or Liberty, and a number of lions. The persons represented had their names painted on their respective pedestals, but whenever the owner of this wooden museum chanced to take the notion he changed the names and had them painted over. One effigy was of Dexter himself. It was inscribed, "I AM THE GREATEST MAN IN THE EAST."

A famous commercial exploit of Dexter's was the sending of a lot of warming-pans to the West Indies in one of his ships. They were about the last articles that would be needed in that hot climate, but the captain took off the covers, fitted these covers with handles and so transformed them into skimmers. The pan parts he called ladles, and he sold both ladles and skimmers to the sugar manufacturers at a great profit.

Perhaps the oddest thing Dexter ever did was to publish a pamphlet entitled "A Pickle for the Knowing Ones." As a whole it was a jumble of nonsense, and it was entirely without punctuation. He gave away thousands of copies. The lack of punctuation was criticised, and in a second edition he placed a page

at the end devoted solely to punctuation marks with which the public was requested to "pepper and salt" the text to suit themselves.

Several noteworthy places on the coast south of Boston remain to be mentioned. First comes Quincy, where a leading spirit among the pioneer settlers was a man named Morton. He conducted a profitable trade with the Indians, but he and his fellows devoted their gains to rioting and drunkenness. They called their village Merrymount, and set up a May-pole eighty feet high about which they drank and frisked "like so many furies." It was learned at Plymouth that they were selling muskets to the Indians, and Captain Miles Standish came and dispersed the rioters, and Morton was sent to England.

Nearly all the southwestern part of the town is a mass of granite rock that rises six hundred feet above the level of the sea. Here is one of the oldest quarries in the country.

Two houses, in each of which was born a president of the United States

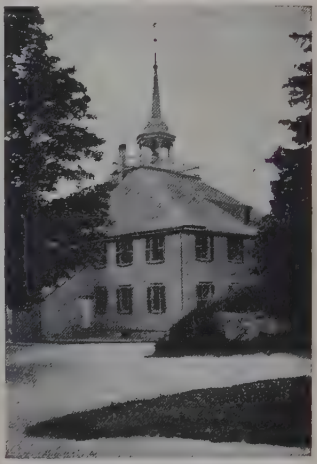
Quincy was the birthplace of two presidents of the United States, John Adams and his son,

John Quincy Adams. The simple farmhouses in which they were born are not a stone's throw apart.

When the elder Adams was a boy he had to study Latin grammar, and he found it so dull that he went to his father and told him he did not like study, and wanted some other employment.

"Well, John," the father said, "then you may try ditching."

He set the boy to work in a meadow back of the house, and at first the change seemed delightful. But by night John would have liked to quit the task. Pride, however, made him continue at it another day. Then he informed his father that he could bear the abominable ditching no longer, and that he would go back to the Latin grammar.



"The Old Ship," an historic church at Hingham

The great Fore River ship-building works are at Quincy. They make steam yachts, steel schooners, and various vessels large and small for naval use.

Beyond Quincy is Hingham, which has a very interesting church erected in 1680. This is the oldest

house of worship in the United States now in use. One interesting item in its history is the fact that the parish once appointed two men to keep its porch from being needlessly encumbered with women on the Sabbath. The building, because of its peculiar structure, is called "The Old Ship." It has a central belfry, which, in addition to holding the bell, served as a lookout station. The bell rope dangles down to the floor in the centre aisle of the church.

Minot's Ledge Lighthouse

Eight miles southeast of the entrance to Boston Harbor is the most famous of New England's lighthouses. It is a mile and a half from land, on Minot's Ledge, a position of great peril to incoming vessels when a northerly gale is blowing. The rock on which

it stands is thirty feet broad. Only for a short time at low tide does the top of the rock come into view. The first lighthouse on the ledge was a dwelling supported at a height of fifty-five feet on nine solid iron shafts that were ten inches in diameter. This stood only two years. In the early spring of 1851, during one of the heaviest gales known on the coast, great quantities of ice adhered to the supports, and it was completely wrecked. The keeper and his two assistants lost their lives.

The present structure is a tapering round tower of dovetailed granite blocks that are made still more secure by being bound together with heavy wrought-iron pins. The stonework extends up eighty-eight feet, and is solid for nearly half that height. Above the solid portion are the apartments of the keeper, consisting of five rooms, separated from each other by iron floors. At the very top is the light. Two years were required to level the foundation rock, working from April 1 to September 15, and then only when the tide served. The first stone was laid on July 9, 1857, and just four stones were placed in position that season. In 1858 six courses were laid, and not until two years later was the structure completed.

As we go on down the coast we come to Greenbush, where was born, in 1785, Samuel Woodworth, author of "The Old Oaken Bucket." There can be seen his boyhood home with its ancient well-sweep. The poem was written in 1817 when he and his family were living

in New York. One day he came into the house, poured out a glass of water, and drank it eagerly. "The water is very refreshing," he said, "but how much more refreshing a drink would be from the old oaken bucket in my father's well at home."

"Wouldn't that be a pretty subject for a poem?" his wife asked.

At this suggestion he seized his pen, and, as the home of his childhood rose vividly before his fancy, he wrote the familiar words. Nothing else he ever wrote has survived.

One of the famous dwellers on the Massachusetts coast was the great statesman, Daniel Webster. In his later life he lived at Marshfield, and there died and was buried in 1852. He had a domain of over two thousand acres, which he made one of the best farms in the country. He stocked it with blooded cattle, herds of sheep, and fine horses. Gay peacocks strutted over the lawn, and he had guinea hens, Chinese poultry, and other fowls. He embellished the grounds with a great variety of trees, many of them grown from seeds of his own planting, and there was a flower garden covering nearly an acre of ground. The ocean was only a mile distant. All the buildings on the place associated with Webster burned in 1878, except a little study which he sometimes used.

In the haven at Nantucket

Nantucket and Marthas Vineyard

THE town of Nantucket, on the island of the same name, is the quaintest place in New England. It is comparatively little affected by the changing customs and fashions of the mainland, and has an individuality and flavor of the past in its life and homes that are

all its own. The island lies well out in the sea south of Cape Cod. It has a length of fifteen miles, an average breadth of four miles, and is for the most part a wind-swept moor diversified with lagoons and ponds. Nowhere does it rise to any striking height; and the trees, except in the villages, are few and stunted.

When the steamer on which you journey to the island reaches port, you observe many ancient fish-houses on the wharves, and see little fishing-vessels and power boats, dories, and pleasure craft on the water all around. The town huddles about the harbor on land that terraces steeply upward, and on the highest terrace there rises, from amid the roofs and chimneys and the green foliage of the shade trees, the dominating tower of an old white church with a gilt-domed cupola.

Some of the town streets are paved with cobblestones. Nearly all of them are both crooked and narrow, and there are numerous delightful little byways and footpath alleys. The houses are mostly wooden, with sides and roofs of shingles. Many of them were built by old sea captains and are of generous size, two or three stories high. In years gone by, when the house walls were painted red, green, or yellow, and the roofs were tarred, the town must have been even more picturesque than it is now.

The first settler of Nantucket was a man named Macy, who bought the island from the Indians for a small sum of money and two beaver hats. He had previously

"dwelt in good repute" a score of years in the Massachusetts town of Salisbury at the mouth of the Merri-

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On the shore at Sconset, Nantucket

mac River. But one day four Quakers stopped at his house for shelter in a severe rain storm, and he let them remain until the tempest was over. Quakers were persecuted at that time in New England, and it was against the law to entertain them. As a result Mr. Macy was heavily fined, and he resolved to "take up his abode among savages where religious zeal had not yet discovered a crime in hospitality." With two friends and his family, which included five little chil-

dren, he went in an open boat across Massachusetts Bay, rounded Cape Cod, and at length reached Nantucket's sheltered harbor.

He was welcomed by the numerous Indian population of the island, and he built a house. Soon other families came, and the settlers taught their faith to the savages, who presently all became "Praying Indians."

The island government was so free from intolerance that it attracted the Quakers to seek homes there. Their number increased until the majority of the inhabitants were of this faith.

The early dwellers of Nantucket and other places on the New England coast used to keep long boats in which they could push out from the shore and give chase whenever they saw a whale. If they succeeded in making a capture, the yield of oil and whalebone made it a rich prize. But the whales, which for a time were plentiful in the near waters, became increasingly shy. Ships had to go after them, and longer and longer voyages had to be undertaken until vessels would fit out to go to the most distant seas, whence they would not return for three or four years.

Nantucket developed into the chief whaling port of America, and its whaleships in their voyages visited all the waters of the globe. They wandered far from the lanes of commerce, and their captains discovered no less than thirty of the islands of the Pacific. One Nantucket whaleship was lost on the coast of the Fiji

Islands, and all the crew, with a single exception, were murdered and probably eaten.

The world's whaling industry long ago began to decline, partly because of the decrease in the number of whales, partly because of the discovery of petroleum

The whaler *Greyhound*

and its use for lighting purposes, and very few American vessels now make voyages after whales.

In the heyday of its prosperity as a whaling port Nantucket had ten thousand inhabitants. The island's present permanent population is less than three thousand. But there is a great inflow of summer visitors. It claims that it is one of the best of the nation's health resorts. To be on Nantucket is like being on

a ship anchored in the ocean. It is twenty-four miles from the nearest mainland, and the air cannot help being pure.

One custom which still survives in the old port is that of the curfew. Each evening the bell in the ancient church tolls its warning for everybody to get off the streets, and for all house lights to be put out, and for people to go to bed. There is also a "rising bell," as it is called, rung at seven o'clock, and a twelve o'clock bell at noon.

Two watchmen used to go on duty at the church after the curfew rang. They took hourly turns in watching from the tower. If a fire was seen, they ran shouting and blowing horns through the streets.

There were other watchmen who served as a sort of night police force. It was a part of their job to keep the boys quiet. If they found them in mischief, there would be a chase. Each watchman carried a hook. It had a handle three feet long, and the hook was just right to catch a boy round the neck or slip round his leg. If a boy was caught, the watchman would give him a few raps with the wooden end of his hook and let him go. These watchmen would go through the streets at midnight calling out, "Twelve o'clock, and all is well!"

Until a few years ago Nantucket had a town crier. He went about the place crying out the news and whatever any one wanted to advertise. This is something the way he would run on: "Oh, yes! oh, yes! there's

been a fearful flood out West. Mississippi River all under water! Big murder in Chicago! Awful news in the papers to-day! Steamer will leave at two P.M. Here's a sample of Jones's Soap! Does any one want to buy watermelons? Worth ten cents this week!"

In the whaling days he spent a good deal of time in the tower of the old church watching for returning vessels. He had keen eyes, and it was said that he could see farther than two ordinary men put together. When he sighted a whaler coming he would blow a horn and hurry to tell the captain's wife, and she would give him fifty cents or so. Then she would take a spy-glass and go up to the roof. The old houses had platforms perched on their peaks enclosed by strong railings. These were reached through a trap door, and served as lookouts from which to watch the harbor and the incoming and outgoing vessels.

On one of the sandhills back of the town is an old windmill. It was built in 1746 and was used till 1892. Now it is taken care of as a relic of the past. The tips of the arms come almost to the ground, and the mill has two doors so that if the sails happened to be whirling across one of them the other could be used.

There is a sharp contrast between the summer liveliness and winter quiet of the island. At times, in the cold months, the field ice blows into the harbor, and the steamer may stop running for several days. Once the island was thus cut off for three weeks. On such

An old Nantucket windmill

occasions supplies of kerosene and butter and some other things perhaps get low, but there is no suffering.

A large and interesting neighboring island is Marthas Vineyard. This, of all the coast resorts, is said to be the favorite summering place of school teachers. It used to be famous for the knitting of stockings. In the years that followed the Revolution the island women knitted fifteen thousand pairs annually, and the statement is made that the people on vessels approaching its harbors could hear the click of the knitting needles before the town lights hove in sight.

There were stirring times on the island when we were at war with Great Britain, and the British ships-of-war were prowling about its shores. One of the

heroes of those days was a Mr. Cousins, who lived where Cottage City now is. He would have liked to be fighting in the patriot ranks, but his health was too delicate. An enemy war vessel one day dropped anchor off shore halfway over to Cape Cod, and Mr. Cousins got out his old flint-lock, proceeded to the beach, and began to blaze away at the vessel in right good earnest. He knew his gun could not possibly carry a bullet so far, and he did not in the least disturb

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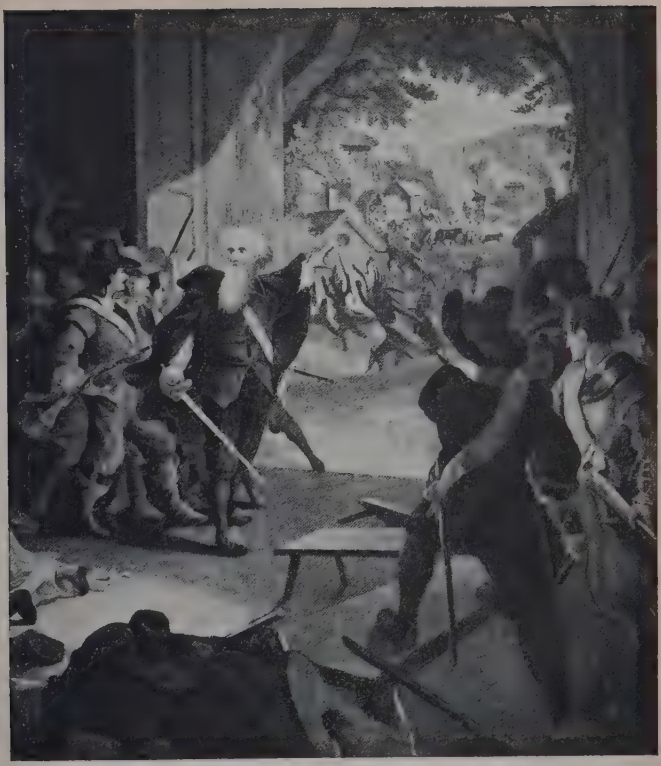
Gay Head, Marthas Vineyard

the enemy, yet all day long he continued loading and firing as rapidly as possible. When he was asked why he was wasting so much good powder, he responded that it was to "show his colors."

A former island resident, whose home was at the little rustic town of West Tisbury, was Captain Joshua Slocum, author of "Sailing Alone Around the World," one of the most interesting accounts of real sea experiences ever written. The voyage which is the subject of this book was begun in 1895 at Boston and lasted three years. It was made in a little vessel that the captain built himself. The *Spray*, as he called it, was thirty-seven feet long and fourteen feet wide, and the cabin was too low to stand upright in. Much of the time the wheel was lashed, and the boat steered itself. In the fall of 1907, the captain sailed away in the *Spray* for South America to explore the Orinoco River, and he has never been heard of since.

Captain Slocum on the *Spray*, the boat in which he sailed alone around the world



"The Angel of Hadley"

The Connecticut Valley in Massachusetts

THERE are many well-tilled farms on the fertile lowlands that border the Massachusetts portion of the Connecticut River, but more important than these are the industries in the thriving commercial towns and cities.

Springfield is the place first settled. William Pynchon and others came thither from Roxbury in the spring of 1636 and established homes after buying the land of the savages, to whom it was chiefly valuable as a range for hunting and fishing, and the gathering of nuts and wild fruits. Mr. Pynchon remained in Springfield only a few years, but his son, "The Worshipful Major John," was long the leading citizen of the valley and carried on an extensive trade with both the whites and Indians. Sometimes he sent in a single ship to England five thousand dollars' worth of otter and beaver skins. Other skins that he bought were the gray and red fox, the muskrat, the raccoon, the marten, mink, wildcat, and moose. Most of them were packed in hogsheads. Many of the skins were brought down the river from the distant North and West.

Another early notable was Deacon Samuel Chapin, and one of the city's finest art treasures is a statue of him by St. Gaudens, showing a typical Puritan on his way to church with a big Bible under his arm.

A third Springfield worthy of the period was Miles Morgan. He made the journey from the Connecticut Valley to Beverly to marry the lady of his choice, taking with him a packhorse, an Indian, and two friends. After the wedding the horse was loaded with the bride's effects, and she, her husband, and the other three made their way through the forest on foot to Springfield, a distance of one hundred and twenty

miles. Morgan, though unable to read or write, held many important positions.

Like numerous other New England towns, Springfield suffered severely in King Philip's War. In October, 1675, the Indians burned thirty-two of its houses and twenty-five barns, and killed one woman and four men. Only fifteen houses were left standing, and some of the homeless families and the troops who were sent to the town spent the following winter in dugouts and in cellars rudely roofed over.

The Indians retreated after their assault, and the pursuing whites accomplished little except to take a single squaw prisoner. One of the old accounts says she "was ordered to be torn in pieces by dogs, and so was dealt withall."

The first bridge built across the Connecticut on its broader course between the Sound and the northern boundary of Massachusetts was erected at Springfield in 1805 after years of agitation and considerable ridicule of the scheme by local wiseheads. "You might as well attempt to bridge the Atlantic," one man declared.

The bridge was wooden, but was not roofed over. Its roadway ascended and descended with the curve of the arches of each span. It was painted red. When it was opened there was a procession, a prayer, and a sermon, and there was music, ringing of bells, and a salute of seventeen guns fired three times. After nine years' service it showed signs of weakening and

was replaced by the big covered "Old Toll Bridge," which still stands. Tolls were collected until 1872.

During the Revolution various munitions of war were made in Springfield — at first in shops along Main

"The Old Toll Bridge" at Springfield

Street and in some of the barns, but later these public works were moved to a ten-acre square on a broad hilltop that the town had taken for a training field. Here was established a few years later a government armory, and in the Civil War the factories, by running night and day, attained a daily output of one thousand rifles.

At one spot, just outside the Armory grounds on State Street, is what looks like a quaint old gravestone.

It is curiously decorated with the sun, moon, and a star, and some other objects, and it is inscribed thus:

BOSTON ROAD
This Stone is Erected
by JOSEPH WAIT Esq.
of BROOKFIELD
For the Benefit
of Travellers
AD 1763

Wait was a merchant, who lost his way in a snow-storm and wandered off the road here. He put up the stone to save others from a like experience.

Not far from this stone is a boulder that marks the battle place of Shays' Rebellion, January 25, 1787. In the unsettled period that followed the Revolution there was little money, prices were high for what farmers had to buy, and low for what they had to sell, and imprisonment for debt was a common occurrence. Daniel Shays, who had been an officer in the recent war, began drilling the disgruntled farmers of the valley and presently led a rustic army of eleven hundred men to seize the Springfield arsenal. A small but well-armed force opposed them when they neared their goal, and a shot from a howitzer was sent into their midst, killing four of them. The ragged army halted appalled, then fled in a panic, and the rebellion was completely stamped out within a few weeks.

At Springfield is published the famous Webster's

Dictionary, and the *Springfield Republican*, which many authorities consider unrivalled in its daily presentation of the news, and the ability of its editorial comment. The city has many buildings that have architectural charm, and takes especial pride in the municipal group with its tall tower. Among the important manufactures of the place are pistols, railroad cars, skates, buttons, and art goods.

Springfield's municipal group

The neighboring town of Westfield is known as "The Whip City." From it come ninety per cent of all the whips made in the United States. It is also called "The Pure Food Town," because of a remarkable crusade that originated there to stop all traffic in impure foodstuffs. The first impulse to act was aroused by the effect of a piece of poisonous candy on a child, which was observed by the professor of chemistry at the Westfield Normal School.

Another near-by place that has won a title of its own is Holyoke, "The Paper City." Its development as

a manufacturing place is due to the power obtained from the sixty-foot fall of the river there. The first dam was completed in the autumn of 1848. On the day appointed for closing the outlets and letting the water fill up the channel back of the new structure, throngs gathered on the river banks to see the show. The story of the occasion is told in the following despatches sent to Boston to the head officer of the company that built the dam:

The Westfield River

"10 A.M. Gates just closed; water filling behind dam.

"12 M. Dam leaking badly.

"2 P.M. Stones of bulkhead giving way to pressure.

"3.20 P.M. Your old dam's gone."

The huge mass of lumber, stone, and earth had been torn from its foundations, and a great wave carried it down the channel, rolling it over and over and breaking it into fragments.

A second and more scientifically planned structure was completed with entire success the next year. It furnished what was at that time the greatest water power ever known. The water is carried through the city in canals on three different levels. It flows first into the highest canal, and, after turning the wheels of the mills alongside, passes to the next one to be used again by a second series of mills. Finally, after serv-

One of the three Holyoke canals with cotton, paper, and other mills beside it

ing in the same way for a third time, it escapes into the river channel. Paper mills predominate in Holyoke, but there are also great cotton, silk, and other mills.

A few miles farther up the river is the attractive town of Northampton. One of its early ministers was Solomon Stoddard. The Indians in their forays never attempted to harm him, for they thought he was "the Englishman's God."

Once Rev. Mr. Mix of Wethersfield, Connecticut, journeyed to Northampton to call on Mr. Stoddard. Not long after he arrived he asked to see his host's five daughters. They were called, and he conversed with them for a few minutes. Then he asked Mary if she would marry him, and said he would smoke a pipe with her father while she made up her mind. But her answer was not ready when the pipe was finished, and he returned to Wethersfield. However, he soon received the following letter:

"*Rev. Mr. Mix:*

Yes.

Mary Stoddard."

Another old-time Northampton story is of a resident who was so saving that whenever he went to the meadow to work he would stop his clock from running so it would last longer.

Smith College is at Northampton, and within ten miles are Mount Holyoke College, Amherst College, and the State Agricultural College.

The town is the trading centre for a considerable region of hilly farming country that lies westerly. In this hill country, at Cummington, the poet Bryant

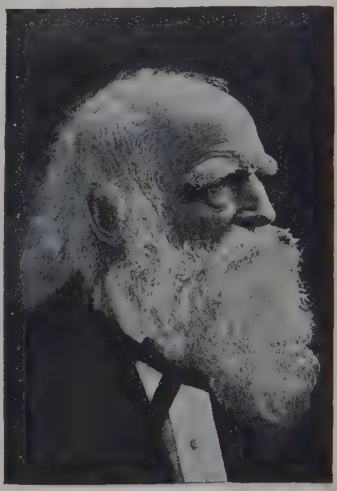
was born in 1794. At the age of sixteen months he knew all the letters of the alphabet, and when not quite five years old began to attend the district school. About the time he was ten he wrote and declaimed a rhymed description of the school, and this was printed

Smith College students on Paradise Pond

in the county paper. At seventeen he wrote "Thanatopsis," one of his best-known poems. It soon found its way into school-books, was quoted from pulpits, and gave the author a national fame. He studied law, and began the practice of it in the little town of Plainfield just across a valley from his own home.

Plainfield has another claim to our interest in the fact that Charles Dudley Warner was born there in

1829. His "Being a Boy" is one of the most entertaining descriptions of old-fashioned New England farm life ever written. The experiences he wove into the book were partly gained at Plainfield and partly at Charlemont in the Deerfield Valley, where he moved when he was eight years old.



William Cullen Bryant

East of Northampton, across the Connecticut, is "Old Hadley." When the town was a pioneer village two fugitive regicides, Generals Goffe and Whalley, were hidden for years in the home of the Hadley minister. Once, when the town was attacked by Indians while the people were at church, General Goffe saw from his window their skulking approach, and hurried to the meeting-house to give the alarm. By the time he got there the war-whoop sounded and the savages were at hand. The people were thrown into great confusion, but the grave gray-bearded stranger assumed command with an air of authority, and under his direction they routed the invaders. Then he vanished, and for a long time

afterward the people believed that he was an angel sent by God for their deliverance.

"Fighting Joe Hooker," the most notable New England general in the Civil War, was a Hadley boy.

Another valley town which commonly has "Old" before its name is Deerfield. Twice it was practically wiped out by the Indians, and the second time many of its inhabitants were carried away captive to Canada in midwinter. One of these captives was the little daughter of the minister. She grew up among the Indians and married one of them and steadily refused

The broad street at Hadley, one mile long and twenty rods wide

to return to live with her Deerfield kindred. A garrison house escaped the torches of the raiders. Its front

door, in which the Indians hacked a hole with their tomahawks to shoot through at its inmates, has been preserved among the treasures of the remarkable museum of antiquities that the town possesses. In the southern part of Deerfield, beside a sluggish little brook, is a monument where seventy-one persons slain there by the Indians are buried in a common grave. The stream has been called "Bloody Brook" ever since.

"Fighting Joe Hooker," the most notable New England general in the Civil War

At Turner's Falls occurred another desperate battle with the Indians in which both they and the whites suffered severely. It was in the spring when the Indians were there to fish. They were surprised at daybreak while asleep, and many of them were driven into

the water and were swept to their death over the falls. But Indians came from other camps, and the retreat of the English was a tragedy.

A few miles farther up the river is Northfield, or Squakheag, as it was originally called. At the outbreak of King Philip's War it was on the far frontier and had been settled only three years. Here were seventeen thatched cabins, a church, a log fort, and a stockade of rough logs eight feet high pierced with loopholes. One day in early September, while some of the men were working in the meadows, a band of Indians under Sagamore Sam and another chief known as "One-Eyed John" assailed the town. They killed a number of people in the houses, shot down the workers who attempted to make their way from the meadows to the settlement, and burned several of the dwellings. But they could not capture the stockaded enclosure. A party coming to the aid of the town was ambushed, and nearly all of them killed. The heads of the slain were stuck up on poles by the wayside.

An old house that survived the Indian attack on Deerfield

Soon afterward this town was abandoned, and the savages wiped out what remained of it with fire. Presently a new settlement began, but shortly afterward suffered the fate of the first.

A short distance south of the town is Clark's Island, which has a curious legend of Captain Kidd. We are told that the pirate sailed up to this secluded spot, and he and his men brought on shore a heavy iron chest full of gold and jewelry and other precious loot. They dug a deep hole and lowered the chest into it. Then, in what was considered the proper old-fashioned pirate way, one of the crew was selected by lot, killed, and his body placed on top of the loose earth that had been thrown into the hole. His ghost was supposed to haunt the vicinity, and to forever guard the riches from audacious treasure-seekers.

From time to time, in the darkness of night when the gales howled, persons are said to have seen sailing up the stream a phantom ship, manned by a spectral crew, and commanded by a black-bearded ghost with the familiar features of Captain Kidd. Opposite the island the anchor was let go, and Kidd in a boat rowed by four sailors went ashore. After satisfying himself that the plunder was safe he returned to the ship and sailed down the river.

Some people doubt the whole story and ask how Captain Kidd ever navigated his ship up there past the rocky falls.

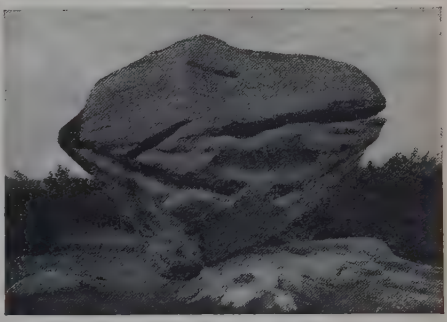
Greylock, the highest Massachusetts mountain

Beautiful Berkshire

BERKSHIRE County sweeps straight across the western end of Massachusetts. It is a district of mountains and tumbled lesser heights, and, though one or two of its valleys are broad enough to give a sense of repose, even there the blue waves of the encircling hills

are constantly in sight. From the uplands the streams come coursing down the wooded glens, with here and there a foaming waterfall, and they go on through the valleys, still swiftly as a rule, but sometimes broadening into a pond or lake, and occasionally are set to work to turn the wheels of a mill.

It is one of the most attractive of New England resort regions, and portions of the county are famous as the summer playground of millionnaires from the great cities. In other parts farms predominate, some of them thrifty, and some of them quite otherwise.



Balanced Rock, which weighs one hundred and fifty tons, yet can be easily swayed by a man's weight

Balanced Rock is the county's greatest natural curiosity. This is reached by a pleasant drive northeasterly from Pittsfield. Its height is eighteen feet, its weight about one hundred and fifty tons, and it rests on one square foot of surface. Yet it is so evenly balanced as to be readily swayed by a man's weight.

In the northern part of the county is Greylock, 3500 feet high, the loftiest mountain in the state.

Some claim that it was named after an Indian chief of the vicinity. Others attribute the name to the mountain's appearance when the hoar-frost of autumn creeps downward from the summit, touching each dark evergreen with silver gray.

Near the base of Greylock is the busy manufacturing city of North Adams, on the outskirts of which is the western portal of the Hoosac Tunnel. The Hoosac mountain range separates the Connecticut Valley from the valley of the Hudson. It is many miles across, but at one point the Deerfield River flows at the very foot of the central ridge, and then goes on eastward to the Connecticut, thirty miles away. On the opposite side of the ridge the Hoosac River flows westward from the foot of the mountain wall, and the valleys of these two streams furnish an easy route for a railroad. Before the days of railroads the possibility was considered of tunnelling the mountain for a canal to furnish a direct avenue of easy grade between the West and Boston.

In 1842 a railroad was completed over the mountains farther south, but the grades were steep and difficult, and two years later work was begun on the Hoosac Tunnel. A great drilling machine that weighed seventy-five tons was used at first, but it soon broke down and was sold for old iron. Then, for a long time, the drilling was done by hand. Afterward a compressed air drill was invented which made the progress much more rapid. The men worked in re-

lays of eight hours each, and there was no pause, day or night. When the work was in full swing the pounding of the drills, the rumbling of the cars carrying away the refuse, and the explosions made a noise in the narrow passage that was terrific. The drilling was carried on from both sides of the mountain, and the floor of each tunnel was slanted slightly upward to allow the water which came down constantly through the roof to flow away. A large amount of water still seeps into the tunnel, and the discharge at the west end is six hundred gallons a minute.

A dweller on the heights

That the work might proceed more rapidly, a shaft was sunk from a hollow on the height to the level of the tunnel, a distance of over one thousand feet, and thence the excavating was pushed in both directions. So accurate were the engineers that the several passages joined with only a few inches discrepancy.

The first train passed through the tunnel in February, 1875, but much still needed to be done. There was great danger from falling rocks, and to make the roof secure the tunnel was arched with brick. It is four and three-quarters miles long, twenty-four feet wide, and twenty feet high, and is equipped with a double track. The original estimate of the cost was two million dollars, yet the actual cost was over fourteen million.

At the time the tunnel was begun it was the biggest undertaking of the kind that had ever been attempted. There were many accidents, and in all one hundred and ninety-five lives were lost. The most serious accident was in the central shaft. The buildings at the top caught on fire, and thirteen men down below perished, suffocated by the smoke of falling timbers.

About ten miles west from the tunnel is Williamstown and its famous college. The chief street in the place is probably unexcelled in America in its rural beauty. It is impressively broad, there are noble trees and velvet lawn, and on either side are college buildings, some modern that have great architectural grace, and some with the simple charm of age, while roundabout are the serene blue mountain ranges.

The boundary lines of Massachusetts, Vermont, and New York meet rather romantically in what is called Moon Hollow.

As we go southerly down the county we come to the little town of Cheshire, which once produced two

hundred thousand pounds of cheese annually. It was there that "The Great Cheshire Cheese" was made and sent by the citizens of the place as a token of their admiration to Thomas Jefferson, then President of the United States. The cheese was one day's product of the town's dairies. Its weight was 1235 pounds, and it was molded in a cider press. Oxen drew it to Hudson, New York, whence the rest of its journey was

The Hoosic valley at Williamstown

by water. Mr. Jefferson sent back a good-sized piece to the inhabitants to satisfy them of its excellence.

The neighboring town of Lanesboro was the birthplace of one of the best known of American humorists, "Josh Billings," as he called himself. His real name

was Henry W. Shaw. After he became an author he let his hair grow long and cultivated oddity in his appearance. He always spent his summers in Lanesboro, and enjoyed sitting around cracking jokes and talking to congenial friends and acquaintances. Both fame and fortune came to him through his writing and lecturing, and his whimsical wisdom and fantastic spelling will long be remembered.

"Josh Billings," one of the best-known of American humorists

Here is an example of his writing, which is part of a letter describing a sojourn in the small Berkshire town of New Ashford:

"Right in front ov the little tavern, whare i am staying, rizes up a chunk ov land, that will make yu feel weak tew look at it.

"I hav bin on its top, and far above waz the brite blue ski, while belo me the rain shot slanting on the valley, and the litening played its mad pranks.

"But what a still place this New Ashford iz.

"At sunrize the roosters crow all around, once

apeice; at sunset the cows cum hollering home tew be milked; and at twilite out steal the krickets, with a song, the burden ov which seems sad and weary.

"This iz all the racket thare iz in New Ashford. It iz so still here that yu can hear a feather drop from a bluejay's tail.

"Out ov the mountain leaks a little brook, and up and down this brook each day i loiter.

"In mi hand i hav a short pole, on the end ov the pole a short line, on the line a sharp hook, looped on the hook a grub or a worm.

"Every now and then thare cums dancing out ov this little brook a live trout no longer than yure finger, but az sweet az a stick ov kandy, and in he goes at the top ov mi baskit.

"This iz what i am here for; trout for breakfast, trout for dinner, and trout for supper.

"I hav not a kare on mi mind, not an ake in mi boddy.

"I havn't read a nuzepaper for a week, and wouldn't read one for a dollar.

"I shall stay here till mi munny givs out, and shall cum bak tew the senseless crash ov the city, with a tear in mi eye, and holes in both ov mi boots.

"The fust thing i do in the morning, when i git up, iz tew go out and look at the mountain, and see if it iz thare. If this mountain should go away, how lonesum i should be!

"It is now 9 oclk, P.M., and every thing in New

Ashford iz fast asleep, inkluding the krickets. I will just step out and see if the mountain iz thare, and then i will go tew bed too.

"Oh! the bliss ov living up in New Ashford, cluss bi the side ov a grate giant mountain tew guard yu, whare every thing iz az still az a boys tin whissell at midnite, whare board iz only 4 dollars a week, and everyboddy, kats and all, at 9 oclk P.M., are fast asleep and snoring."

The largest place in Berkshire is Pittsfield. Its first settler rode over the hills from the east, with his wife on a pillion. Another early comer lay for three days in a hollow log with savages about. The first settler to arrive with a cart had to hew a way for it through the woodland. At night, for fear of wild beasts, he tied his horses to a tree and stood guard, munching apples to keep awake. The wolves lurked about the new hamlet, and often drove the sheep close up to the houses. Sometimes a housewife would shoot one of them.

At the time that Burgoyne made his invasion from Canada, Pittsfield had for its minister "Fighting Parson Allen." He went with the Berkshire troops to Bennington as chaplain, and when the battle began mounted a stump and exhorted the enemy to lay down their arms. He received only the spiteful response of musketry, and he left the stump, seized a gun, and did valiant duty with the rest of the troops.

Not far from Pittsfield is beautiful Lake Onata.

Once a dweller on its shore, while out with his dog, hunting, saw a fine white deer stooping to drink at the margin of the lake. He raised his gun to fire, but, before he could pull the trigger, his dog howled, and the deer faded away. There is a Mohegan legend of such a deer that came each spring with the opening of the cherry blossoms to drink from this lake. It was the Indian belief that, so long as the snow-white doe came there to drink, their harvest would not fail them, or pestilence destroy them, or fires lay waste

Pontoosuc Lake near Pittsfield

their country. They never molested the creature. However, at last, a Frenchman from Canada, who visited

them, induced a warrior, by a gift of fire-water, to kill the gentle deer. He set out for Montreal with the skin, but was slain on the journey. Never after that did things go well with the Indians.

A Berkshire waterfall

The town of Stockbridge was originally laid out for their accommodation, and in 1737 a church and schoolhouse were built for them there. The settlement gradually increased in size until the Indians numbered nearly five hundred. They were Christianized by John Sargent, who came into the wilderness of southern Berkshire at the age of twenty-four, mastered their language, and preached three or four sermons a week to them. In 1751 Jonathan Edwards settled in Stockbridge to assist in the task of converting the red

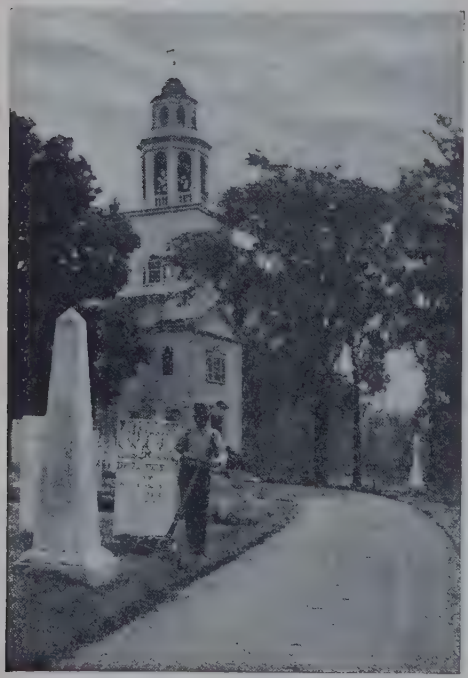
heathen. His grandson, the notorious Aaron Burr, spent a part of his boyhood in the town. The Indians all migrated to western New York shortly after the Revolution.

Cyrus Dudley Field, who laid the first telegraph cable across the Atlantic, was born in Stockbridge. His father was the minister. Cyrus had three brothers and all four boys were mischievous. It is said that their father would take two of them into the pulpit with him, while the other two sat in a pew with their mother. During the "long prayer" the minister would pray with a hand on the head of each of his charges "to be sure they were there."

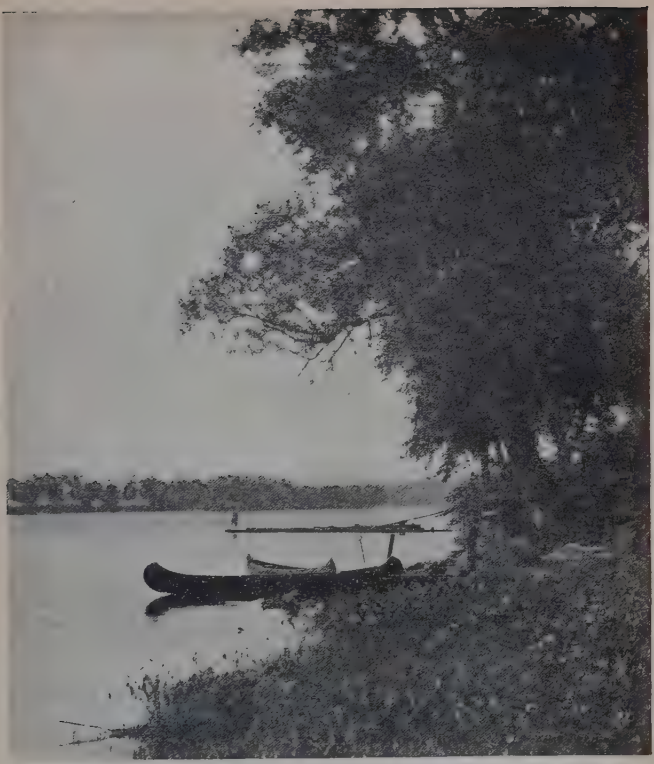
Stockbridge and Lenox are both famous summer resort towns. The creation of beautiful estates at the latter place began about 1850, and now there is not a hilltop nor a valley but has its splendid houses and far-flung attendant gardens, and each mansion commands some natural mountain vista of great beauty.

At one time the vicinity was such a resort of notable writers, who had either permanent or summer houses there, or came thither as visitors, that it was called "a jungle of literary lions." Among the rest was Hawthorne, who came in the spring of 1850 to dwell with his family in a little red house in Stockbridge, just over the line from Lenox. Down below, in the valley, was a beautiful lake, and roundabout were hills and mountains. While there he wrote "The Wonder Book," which boys and girls have read with delight ever since.

Each day he went with his children, Una and Julian, to a farmhouse half a mile distant for milk along a road that he called "The Milky Way"; and he used to play with them flying kites, went nutting and climbing trees, made boats for them to sail on the lake, took them fishing and flower-gathering, and tried to teach them to swim. In winter he was their companion in coasting, and in building a palace of snow with ice windows. Yet he was so shy with strangers that he would jump a fence to avoid meeting them on the highway.



The old white church in Lenox



The Merrimack above Pawtucket Falls

Bay State Industries, Places, and Famous People

MARKET gardening is done on a large scale near the cities. Many of the market gardeners have big glass houses that are heated in winter so that crops are growing in them all through the year. In the adjacent fields several crops are raised each season.

As soon as one crop is marketed the ground is ploughed, manured, and harrowed, and another crop started. Planting, cultivating, weeding, watering, and gathering these market garden crops give employment to many hands.

The City Hall, Worcester

Onions, tobacco, hay, and fruit are important crops in some sections, and milk has to be produced in large quantities to supply the city dwellers. Boston requires so much milk that a great deal is brought to it by train from long distances.

The big city of the central part of the state is Worcester. It was much harassed by the Indians in its early days, and for a long time it was so pestered by wolves that the people were deterred from raising sheep. The occupations of the inhabitants were chiefly agricultural. Now the place is a great manufacturing city, especially noted for the making of nails, screws, needles, wire, different kinds of tools, envelopes, and boots and shoes. The

most extensive wire mill in the world is in Worcester. Here, too, is the richly endowed Clark University.

A favorite pleasure resort of the people is the lake on its borders, which bears the resounding Indian name of Quinsigamond. This name is a combination of words which mean "the fishing-place for long-noses" — that is, for pickerel.

At Spencer, a few miles west of Worcester, was born in 1819 the inventor, Elias Howe. After he left the home farm in early manhood he worked in machine shops in Lowell and Boston. A chance remark about a machine to do sewing set him to thinking. After many years of experimenting, poverty, and discour-

A lake in a Worcester park

agement he evolved the sewing machine, which he patented in 1846. At first he had uphill work to prove that it was practical, and that he was its real

inventor. But at last he reaped the financial success which was his due, and for a time had an annual income of nearly a quarter of a million dollars. In the Civil War he served as a common soldier, and on one occasion, when the pay of the regiment was delayed, he advanced the money himself.

Another famous Worcester County inventor was Eli Whitney, who was born at Westboro in 1765. He contrived the wonderfully simple cotton gin which separates the cotton fibre from the clinging seeds. But he gained no profit through his invention, for it was stolen and involved him in expensive lawsuits. Later he gave much attention to the improvement of firearms, a factory was established near New Haven, and his ingenuity and business ability brought him a fortune.

Mount Wachusett

The town in this part of the state which had the severest experience in the Indian wars was Lancaster. A night attack in February, 1676, nearly wiped out the settlement; many persons were killed, and others were carried off captive. One of the captives was Mrs.

Rowlandson, the minister's wife. She accompanied the Indians in all their wanderings, and was made the slave of a chief named Quinnapin. Often they were destitute of food, and were driven to boil the hoofs of dead horses, or to procure marrow from old bones, and eked out this fare with groundnuts and the tender buds of trees. If a deer or a bear was killed, they had a ravenous feast. After a few months Mrs. Rowlandson was ransomed. The negotiating was done at Redemption Rock near Wachusett Pond in the town of Princeton.

Lancaster's "Great Elm," which attained a girth of twenty-five feet

Massachusetts was the leading colony for mining and manufacturing iron for a hundred years. At first the iron was obtained largely from rusty deposits in swamps. The farmers would combine to establish rude forges where the ore was melted with charcoal fires and cast into such articles as kettles and cannon, or hammered into bar iron. Later, richer ores were opened up, and pig iron good enough to be used for edged tools was produced in furnaces. The iron for the famous *Monitor*, which played so important a part in the Civil War, came from near Mount Greylock.

Most of the New England mines closed long ago because they could not compete with those in Pennsylvania and the West. Nevertheless, iron and steel manufactures that require little metal, but much skilled labor and exact machinery, still flourish in New England. For instance, over half the tacks of the nation are made in or near Taunton.

At the edge of the water beside the Taunton River in Berkley is the famous "Dighton Writing Rock," with its curious, but rather indefinite inscriptions. The flat, sculptured face of this granite rock rises about five feet above the ground and is eleven feet long. The designs were on the rock when the first settlers found it. Some have thought they were chiselled by the order of one of the old pirate captains to mark the site of buried treasure, and the shore roundabout for a considerable distance has been all dug over in a vain search for the hidden riches. Others think the stone was marked by a prehistoric navigator from Europe. More likely it commemorates some event in Indian experience.

There are about four hundred cotton mills in New England. They make such things as sheets, towels, stockings, underwear, thread, string, handkerchiefs, and gingham and calico dress-goods. Over a thousand persons may be employed in a single mill.

The cotton is brought in bales from the Southern States where it is raised. Each bale weighs about five hundred pounds. After the dirt and small sticks

have been removed, the fibres are combed out straight, and pressed into thin gauze-like sheets. These are gradually drawn out and twisted into threads, and then the threads are woven into cloth by the looms.

At Fall River is the greatest group of cotton mills in the United States. The Quequechan River, which flows through the city, has a fall of one hundred and thirty feet in a half mile, and the great mills crowd thickly along it. More than two miles of cotton cloth a minute are woven in these every working day, or enough in a year to very nearly reach to the moon and back.

The neighboring city of New Bedford is also famous for the number and size of its cotton mills. This was formerly a great whaling centre. More than three hundred whaling vessels sailed from it in a year just before the Civil War.

The section of country around Fall River, and the valley of the Merrimack are the two most important centres of cotton manufacture in America. Lowell is called "The Spindle City" because of the great number of spindles in its big cotton mills. The Pawtucket Falls furnish power. No one can tell for how many successive years the Indians had resorted to the falls for salmon, shad, and sturgeon before the apostle, Eliot, came thither "to spread the net of the Gospel to fish for their souls." Every spring he preached to them on Massic Island, where one of the mills now stands.

In the rude early days, when the first Lowell cotton

mill was built in 1813, the sun aided in bleaching the cloth. Large areas of it were pinned to the grass, and the overseer's wife sprinkled them regularly with her watering-pot.

For several decades the workers in the spinning-room were Yankee girls from the farms. One of them was the poet, Lucy Larcom, and in intervals between tending the shuttles she committed verses to memory from slips of paper pasted on the walls. Later the looms were watched by Irish lasses, and then by French Canadian girls. Now most of the employees are emigrants from continental Europe.

Down the river is Lawrence, another big mill city, and a few miles farther on is Haverhill. The latter place suffered severely at the hands of the Indians in a raid March 15, 1697. They carried off several captives, one of whom was Mrs. Hannah Dustin, who, with a woman companion, was taken up the river to an island six miles above Concord, New Hampshire. Here was the home of the Indian whose prisoners they were. The Indian family consisted of two men, three women, and seven children; and there was one other captive, a boy who had been carried away from Worcester, the previous year.

On the last night of the month Mrs. Dustin, the other woman, and the boy armed themselves with tomahawks, and killed ten of the twelve Indians. A lad for whom they had a fancy was spared purposely, and one of the squaws whom they had left for dead

jumped up and ran with him into the woods. The three whites took what provisions there were in the wigwam of their master, and put them and a gun and a tomahawk into a canoe. They destroyed the other canoes and embarked. But they had not gone far when Mrs. Dustin decided to return and secure the scalps of the Indians to show their neighbors at home lest their story should not be credited. So back they went, got the scalps, and carried them to the canoe

The dam at Lawrence

in a bag. Then they proceeded on their journey, and did not pause even at night, for while two of them slept the other managed the boat, and they reached home without mishap.

At Haverhill Whittier was born in 1807 in a simple Quaker farmhouse, and the dwelling remains to-day much as he described it in his poem, "Snowbound."

Fully half the nation's boots and shoes are made in Massachusetts. Lynn is the leading city for this industry. The old-time shoemaker used to travel with his kit from house to house, and would stay in each house long enough to make shoes for the entire family. He sat on a low bench and cut, sewed, and hammered with much the same simple tools as had been used for the purpose in Europe a thousand years before. To-day steel fingers have taken the place of the shoemaker's hands, and there are machines which will sew six hundred shoes daily, and some that put pegs into the soles at the rate of nine hundred a minute. About one hundred and fifty New England towns have shoe factories in them, and many large firms make special shoes which they spend much money in advertising.

John G. Whittier

The first American watch factory was established

at Shrewsbury, near Worcester, about 1790, and since then the industry has developed into one of great importance in southern New England. The simplest of the watches have only fifty-four parts, and the finer ones nearly two hundred. Watches first became practical about the year 1500 when a German invented the mainspring, and an Englishman the hairspring and balance wheel. Waltham, not far from Boston, is

An old-time shoemaker

famous for its watches all over the civilized world. The business began there in 1854 with the employment of ninety people, whose output was five watches a day. Now four thousand persons are employed, and produce daily three thousand watches. Some of the screws are

so small that a lady's thimble will contain twelve thousand of them.

Between Waltham and Boston is Cambridge, where is located the oldest of our country's colleges. It was

The Harvard Gate

established only six years after Boston was settled. Two years later a young clergyman, John Harvard, died, and left his books and half his estate to the college. Forthwith it was called by his name.

One wooden building was all the college had at first. In this was a bare hall furnished with plain substantial tables, a small room containing John Harvard's books, and a few chambers and studies. Even this building was thought by some people to be "too gorgeous for a wilderness." The first class to graduate numbered

nine. Many gifts were received to aid the college, some of money, some of books, some of silver or pewter articles. Live sheep were sent for the students' food, and homespun cloth for their clothing. One gift was a printing press, which was sent across the ocean from Amsterdam in 1639, and was the first in America. The earliest book to be printed on it was the "Bay Psalm Book." The few copies of this which have survived are so precious that collectors are glad to pay its weight in gold for one.

The university now has nearly one thousand instructors and about six thousand students, and a library that numbers over one million volumes. In a prominent place on the grounds is a statue of John Harvard seated in a chair on a broad pedestal of stone. Many pranks have been played by the students with this statue, a favorite one being to crown the figure with a pan.

It was at Cambridge on the third of July, 1775, that Washington, after an eleven days' journey on horseback from Philadelphia, took command of the American army. He was then forty-three years old. The troops were drawn up on parade, and a multitude of men, women, and children assembled to look on, many of whom came a long distance in all sorts and conditions of vehicles. At nine o'clock in the morning Washington and his officers mounted their horses and rode to the common. The day was warm, and they sought shelter in the shade of a near-by elm, where he

wheeled his horse and drew his sword as commander-in-chief of the forces of the United Colonies. The tree still stands, though much decayed and shattered.

Washington had his headquarters at Cambridge in a large, dignified mansion, which later became the home of the poet Longfellow. A neighboring colonial

Longfellow's house, Cambridge, which duri[illegible] the siege of Boston was Washington's headqu[illegible]ters

dwelling not far away was the birthplace and lifelong home of James Russell Lowell.

One other Cambridge-born notable was Richard Henry Dana, who, when a youth of nineteen, in 1834, undertook a voyage to the Pacific as a common sailor, a record of which is given in his sea classic, "Two Years Before the Mast." In later life he became an eminent lawyer.

A long-time resident of the adjacent town of Arling-

ton was J. T. Trowbridge, one of the most popular and wholesome of authors of boys' books.

Farther on is Lexington, famous in connection with Paul Revere's ride and the beginning of the Revolution.

One of the Lexington stone walls, such as served to shelter the farmers firing at the retreating British

The little green where the first blood was shed at dawn of April 19, 1775, continues unaltered in size, and from it can be seen several dwellings that were there in colonial days. One of these dwellings is the Harrington house, to the front door of which Jonathan Harrington, sorely wounded, dragged himself after the fight, and died on the threshold in the arms of his wife.

At Concord, a few miles beyond, provisions and munitions of war were stored in every farmer's barn, the town house, the tavern shed, and the miller's loft. But, before the British arrived, there was time to

secrete most of the military stores. In the middle of the morning occurred the fight at the North Bridge, and the British retreat began. The redcoats were fired on from the shelter of buildings, trees, and stone walls, all along the way until evening, when they reached Charlestown and were protected by the guns of their fleet.

In its associations with great writers Concord is the most famous town in the United States. Not far from the historic North Bridge is "The Old Manse," which,

The Concord bridge, where the battle began

at the time of the Revolution, was the dwelling of Ralph Waldo Emerson's grandfather, the Concord minister. Emerson himself became a resident of Concord's

Old Manse in 1835, at the age of thirty-two. He believed in high thinking and simple living, and he made some attempts to work on his own land. But his infant son stopped him by saying, "Papa, I am afraid you will dig your leg," and he surrendered his hoe and spade to hands more skilled.

He was not too serious to play, and would sometimes go skating on the river with Hawthorne and Thoreau. Hawthorne, wrapped in his cloak, moved like a Greek statue, Emerson leaned forward as if weary, while Thoreau, who was expert on skates, danced and cut strange figures.

After dwelling two years in the Manse, Emerson moved to a cheerful stately house on the opposite outskirts of the village, and that continued to be his home for the rest of his life.

Hawthorne came with his bride to make his home in the Old Manse in 1843. Besides writing, he raised vegetables, and, in domestic emergencies, washed dishes and cooked. After a sojourn of three years he moved away, but at length returned, and bought and remodelled a house which he called "The Wayside."

His next neighbor to the south was Ephraim Bull, the originator of the Concord Grape. Mr. Bull had a passion for grape-raising, but none of the varieties he could obtain were hardy enough to be relied on for a crop. Wild grapes abounded in the vicinity, and by planting selected seeds of these he at length developed the original Concord vine.

Hawthorne's nearest neighbor to the north was Bronson Alcott, who called his dwelling "Orchard House." There his daughter Louisa wrote several of her famous books for children.

Henry D. Thoreau, the noted nature writer, was born at Concord in 1817. It was his custom to spend a portion of each day in the fields or woods or on the Concord River. He knew the country like a fox or a bird. Under his arm he carried an old music book in which to press plants, and his pockets contained his diary, a spy-glass, microscope, jackknife, and twine. If he saw in a tree a hawk's or a squirrel's nest which attracted him, he climbed up to investigate, and he often waded into pools after water plants.

Henry D. Thoreau, the famous nature writer

Once, in order to prove that a person could provide himself with food and other necessaries and live comfortably, and yet have plenty of time for enjoyment, he put up a cabin in the Concord woods beside Walden Pond, and there dwelt for two years.

The spot where the cabin stood is marked by a cairn of stones to which every lover of Thoreau's genius who goes thither adds a stone from the shore of a near cove.

Dutch Point, Hartford, where Fort Hope stood

Connecticut Beginnings

THE fertile Connecticut valley did not long escape the notice of the settlers on the New England coast, and in the autumn of 1633 Plymouth sent a little vessel under the command of William Holmes to the river. In the hold of the vessel was the frame

of a small trading-house and boards to cover and finish it. When the vessel had sailed up the stream as far as Hartford the crew were surprised to find that the Dutch had built a rude earthwork there and equipped it with two cannon. As they approached this port the drumbeats resounded from it, and the cannoneers stood with lighted matches beside the two guns under the banner of the Netherlands.

The Wethersfield elm, twenty-seven feet in circumference, the biggest in New England

The Dutch threateningly demanded that Holmes should stop or the gunners would fire. But they did not fire, in spite of his refusal to comply. He went on up to Windsor and there erected the trading-house. A garrison was left in it, and the vessel returned to Plymouth.

By 1635 settlements had been started at both Windsor and Wethersfield, and late that year one party of sixty men, women, and children from the vicinity of Boston marched overland by compass,

driving their cattle and swine before them. They were overtaken by winter while still on the way. When they arrived at the river they built rafts and crossed to where Hartford now is, but were obliged to leave some of their cattle to subsist without hay on the east side. Navigation on the stream was completely blocked by ice before the middle of November, and the vessels which were to have brought the settlers' household goods and provisions were abandoned or sailed back.

About this time Lieutenant Lion Gardiner with thirty men took possession of the river's mouth. They tore down the Dutch arms which they found there fastened to a tree, and named the spot "Point Saybrook." Then they built a wooden fort and some houses, and set up a palisade twelve feet high across the neck of the peninsula. Gardiner's young wife came from Boston to dwell in one of the houses amid the drifting snow before the palisade was completed.

Meanwhile the condition of the pioneers at the settlements up the river was so forlorn that many of them were ready to abandon their new homes and return to Massachusetts Bay. In December a party of seventy straggled down the river, and twenty miles above its mouth found a ship frozen in the ice. They went on board, and soon afterward a warm rain set the ship free. Sails were hoisted, and they went as far as Saybrook, where the vessel stuck on the bar and had to be unladen. The unlucky colonists found a

refuge in Lion Gardiner's fort until the ship was afloat. Then away they went to Boston.

The few who remained at the up-river settlements lived on scanty supplies of corn obtained from the Indians, and on such game as they could shoot, and on groundnuts and acorns dug from under the snow. Spring found them exhausted, and their unsheltered cattle dead, but many more people, cattle, and supplies arrived in the summer.

Hartford's first houses were built along a swift-flowing "riveret," at the mouth of which was the Dutch post, Fort Hope. All the town buildings were small. The meeting-house had only plain hard benches for seats, and this house of worship and its successors were none of them equipped with stoves until about 1815. From the very first, however, the meeting-house had a bell. There was probably no other public or church bell in the colonies then except one at Jamestown, Virginia.

The Dutch fort soon had English homes all around it within a short distance. The garrison erected some farm buildings, cultivated a little land, and set out cherry trees which presently produced an abundance of fruit. There was always friction between the garrison and the English. Some of the latter began to plough up land near the fort, and, when the Dutch interfered, cudgelled them. In the night-time they seized ground that had been made ready for seed and sowed it with wheat. Standing peas were cut down

and corn planted instead. They shut off the fort on the landward side with palisades, and they sold a hog which belonged to the Dutch because, as they said, it had been trespassing on their crops. The Dutch were accused of insolence, of supplying guns and ammunition to unfriendly Indians, buying goods stolen from the English, and harboring fugitives from justice. Yet not until 1654, when war was being waged between England and Holland, were the Dutch expelled.

Trouble with the Indians developed early. A trading vessel came a little way up the Connecticut in the summer of 1634, and moored close to the bank. It had a crew of eight men, and two captains named Stone and Norton. A party of Pequots visited the vessel, and two of them were engaged to pilot two of the sailors in a skiff to the Dutch fort at Hartford. The four departed up the river. At nightfall they landed, and the sailors presently lay down and fell asleep. Then their guides killed them.

The Indians who visited the vessel were entertained in a friendly way for several hours; but by and by the crew went on shore, and the savages slew them and Captain Stone. The other captain defended himself with his musket in the cook-room. That he might load and fire faster he emptied a supply of powder into a dish close at hand. Unfortunately the powder caught fire, and there was an explosion which so burned and blinded the captain that the enemy had little difficulty in killing him.

This slaughter and other depredations led to an English foray against the Pequots in the autumn of

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Saybrook Point Light where the Connecticut River joins Long Island Sound

1636, and then the Indians went on the warpath. The fort at Saybrook was first attacked. They pestered it like wasps, and Gardiner ordered that no one should venture out to fish or to hunt the plentiful ducks, geese, and turkeys. Three foolhardy men disobeyed orders and went a-fowling. When they were returning loaded with game the Indians captured two of them. The other ran to their boat and rowed to the fort.

Gardiner had three acres of ripening corn two miles from the fort. He placed five lusty men with long guns to guard it, and they saved most of the crop.

Sometimes the cows returned from pasture with arrows sticking in their sides. All the buildings outside of the palisade were destroyed, and the fort was beleaguered through the winter. In April Captain Underhill arrived with twenty well-armed men from Boston.

That same month the Pequots attacked Wethersfield, killed nine of the English, and took two maidens captive. The garrison at Saybrook espied the Indians afterward coming down the river in three canoes with fragments of their victims' clothes tied to long sticks fluttering like flags. Lion Gardiner fired the fort's "great gun" at them, but they were not hit, and they hastily drew their canoes over a narrow beach and escaped before he could fire again.

The colony was now fully aroused. Probably it did not number more than eight hundred souls, yet ninety men were summoned to go against the foe. They were placed under the command of Captain John Mason, and, on May 10th, they and seventy friendly Mohegans embarked at Hartford in a pink, a pinnace, and a shallop to sail down the river.

After several delays caused by running aground the Indians insisted on being set ashore to make their way to the mouth of the river on foot. They arrived at Saybrook some time before the vessels came and were eager to go at once in search of Pequots lurking in the neighborhood. But it was "the Lord's Day," and they were held back until Monday dawned. Then

they sallied forth, and presently returned, bringing five gory Pequot heads and one wretched prisoner whom they killed that night and ate while they danced and sang round a large fire they had kindled.

The Pequots had two strongholds near the mouth of the Thames River on its east side. Before proceeding against them twenty of Mason's men were sent back to guard the settlements up the river. The rest and the Boston men sailed eastward, but did not stop at the Thames River. Instead, they kept on as far as Narragansett Bay with the hope that by landing there and marching back they could surprise the Indians.

The Narragansetts had a village in the vicinity. They were enemies of the Pequots, and the English obtained from them permission to pass through their country, and the help of two hundred of their warriors. Thirteen men were left with the vessels which they were ordered to take to the mouth of the Thames. The others pushed forward with their Indian allies, and toward evening of the second day came to a field newly planted with corn. There they stopped for a while, and then made a cautious hour's march by moonlight and camped. The men slept with their guns beside them. Their sentries, who were posted some distance forward, were near enough to the Indian fort to hear the revelry of the garrison, which lasted till midnight. The savages had seen the English sail past some days before, and thought they were afraid and durst not come near them.

Before daybreak the English were again on the march. Two miles of an Indian trail brought them to a palisaded fort on what is still known as Pequot Hill near the Mystic River. A part of the English stole up the hill from the south and the rest from the north. There were no sentinels, and the garrison was sound asleep. When within a rod of the palisade an Indian cur barked, and a Pequot warrior shouted, "Englishmen! Englishmen!"

On Pequot Hill. Here the Indians had a fort that the whites assailed and destroyed

At once the assaulting party fired a volley through the log defences. This was answered by a terrific yell. The English tore down the piles of brush that served for gates and swarmed into the fort. But the Pequots remained in their wigwams, and some of them shot from the doors. Mason drove them out of one wigwam, caught up a brand from the fire inside, and applied it to the mats which covered the framework. Instantly the wigwam was ablaze. A rising wind fanned the flames and caused them to spread rapidly through the fort.

Soon the heat was so intense that the English withdrew from the enclosure. But no such privilege was

allowed the Indians. All were killed or burned to death except seven who broke through the English lines, and seven who were captured. There were four or five hundred of them — men, women, and children.

Two of Mason's party were killed and about twenty wounded. Some of them were saved from arrow wounds by their neck-cloths. A piece of cheese in the pocket of another stopped an arrow. One of the officers, who saw the warriors of two hostile tribes engaged in a battle, on a later occasion, said they fought in such a manner that neither party would have killed seven men in seven years. Each combatant shot his arrow into the air at such an elevation that it would drop on an adversary, but the person aimed at usually took the precaution to step aside.

The English carried their wounded to New London harbor, half a dozen miles away. Their vessels met them, and then they made their way to the mouth of the Connecticut where Lion Gardiner greeted them with a salute of the guns of his fort.

When the whites departed from the Pequot country the surviving members of the tribe gathered at the ruins of their stronghold and shrieked and tore their hair. The next day they held a council and decided that it was impossible for them to resist the power of the strangers, and they concluded their only recourse was to all emigrate beyond the Hudson.

They therefore burned their villages and supplies,

and set out on this desperate venture. Some soon turned back, but were later all killed or captured by whites and friendly Indians. The main body of the tribe, after crossing the Connecticut River far enough north to avoid the English at Saybrook, continued along the shore of the Sound in order to get a daily supply of food by digging shellfish. They travelled very slowly.

The English and Mohegans set forth to follow them, the former on their ships, the latter on land. From time to time they overtook stragglers and destroyed or captured them. Near Guilford a Pequot chief and some companions, when closely pressed by

New London Harbor

their pursuers, swam across the harbor from the end of the cape on its eastern side. But they were shot

as they landed by some Mohegans in ambush. The victors cut off the head of the Pequot chief and lodged it in the branches of an oak, where it stayed for years. Since then the spot has been called "Sachem's Head."

The remnant of the fugitive tribe at length took refuge with some local Indians whose village was in a swamp a few miles west of Bridgeport. Their pursuers surrounded the swamp and sent in a call for surrender. In response the Indian villagers and the Pequot women and children gave themselves up. About one hundred warriors remained in the swamp, and they crept to its borders and shot forth their ineffectual arrows at the besiegers all the following night. In the early morning they made a burst for freedom. A heavy fog favored them, and three-fourths of them broke through their enemy's line and got away. They were pursued, and many of them were found dead. The fate of the rest is unknown.

The prisoners were made slaves, some of them in Connecticut and Massachusetts, and others in the West Indies. They were not very satisfactory in servitude to their masters, and they seemed to be physically unfitted for it, for few of them survived long.

Connecticut's other tribes deeded away their land with more or less celerity, and when it was all gone they drifted off to other parts of the country, or became town charges.

An old-fashioned tall clock in a country home

Industry in Connecticut

NEARLY all the interests of the population of Connecticut until after 1800 were agricultural. By that time the whole commonwealth was dotted with towns; and in the heart of each was a common, a church, and a group of wooden houses, usually com-

fortable, but often unpainted, and seldom representing even a moderate degree of luxury. Hartford and New Haven were the only cities, and neither of them had four thousand inhabitants. It was rumored, somewhat doubtfully, that the leading lawyer of the state had an income from his practice of two thousand dollars a year. There were few persons who were very rich, and few who were very poor, and life was equable and placid.

An important crop, almost from the first, was tobacco. Its cultivation was officially encouraged as far back as 1640, but its use was forbidden to any man under twenty-one, unless he obtained a certificate from a physician that tobacco was good for him. No one was allowed to smoke or chew on the streets or in other public places. Tobacco has ever since been extensively grown on the fertile lowlands where the first settlers established themselves. Soil and climate both seem particularly well adapted to its cultivation. The amount now raised is thirty-five million pounds a year, but this looks small when compared with the three hundred and sixty-four million pounds raised in Kentucky, the leader among tobacco-growing states.

Much tobacco is grown throughout all the eastern coast region of our country, and the prosperity of the colonies was largely due to the foreign demand for this crop. Tobacco was unknown in the Old World until after the discovery of America, but when it had once been introduced there its use spread amazingly. It

is one of a number of important plants that originally were found only in America. Some of the others are Indian corn, the potato, the tomato, and the

Cutting tobacco

cinchona from which quinine comes. On the other hand, America only contributed one animal to the domestic uses of civilized man — the turkey.

Connecticut has many excellent dairy farms, market gardens, and peach orchards, but except on the valley lowlands its soil is not very productive.

One of the state's earliest manufacturing industries dates back to 1740 when a man named Patterson settled at Berlin, eleven miles south of Hartford, and began to make tinware. For a time he was the only tinner in the colonies. He would make up as much of the ware as he could carry in a basket, and then tramp over the surrounding country from hamlet to hamlet and from farm to farm selling the new kind of utensils. Pres-

ently others took up the business, and gradually the tinware peddlers made their way to all parts of the country.

Carrying the goods in hand baskets was soon abandoned. Instead, they were put into large panniers on the back of a horse, and later two-wheeled carts were used. Some of the peddlers are said not to have confined themselves to selling tinware and useful "Yankee notions," but to have palmed off wooden nutmegs, oak-leaf cigars, and similar frauds.

The four-wheeled gay-painted tin-peddler's wagon finally came into existence, and there was scarcely a farm home in all New England which was not visited by them. The wares were usually exchanged for local products or rags, rather than sold for money, and the peddlers were sure of a welcome, especially in the sparsely settled sections. Not only was there a desire to traffic with them, but they were an important source of news from other parts of the region and the outside world. Often they were men of superior intelligence with a shrewd business talent that in some instances won them fortunes afterward as manufacturers, merchants, and financiers. The old-time Yankee peddler was a man worth knowing.

It has been said that all the minerals known to man may be found in Connecticut in just sufficient quantities not to pay for mining them. Prospectors have pitted with shallow holes the entire range of sandstone hills which stretches from the northern part of the state

down to New Haven. Some of them discovered a promising vein of copper in 1705, sixteen miles northwest of Hartford at what is now East Granby. Various companies spent money freely mining this copper, but got little of their investment back. After nearly three quarters of a century operations ceased, and in 1773 the colony fitted up the mine as a prison. Its first keeper named it Newgate after a famous prison in London.

The main opening into the mine was near the top of a small, bare hill. Cells were prepared along several galleries, the lowest sixty feet from the surface. The first man sent to the prison had a sweetheart working in a neighboring farmhouse, and on the eighteenth night of his confinement she contrived to draw him up through one of the shafts in a bucket that had been used for hoisting ore. After that the prison remained empty for about two months.

Probably the number of inmates never much exceeded thirty. Handcuffs and fetters were used freely, and gratings were put over the unguarded air shafts, but this did not entirely prevent escapes. Once practically all the prisoners got away after overpowering the guards. The walled-in buildings at the entrance, the gloomy underground cells, and everything about the place were repellant, and it is no wonder that the prisoners used all their ingenuity to get away. One prisoner was a negro murderer who for twenty years was kept chained to the rock in the deepest part of the mine. He slept on a low ledge and drank from a little

pool near at hand into which some water trickled. At last, to entertain himself, he slipped his shackles up over his knees. There they fitted so tightly as to cause an irritation that resulted in blood poisoning, and his legs had to be cut off. He was then given his freedom and lived for years afterward.

Some of the prisoners worked in a prison shop making shoes, and others tramped the revolving stairway of a treadmill that furnished power to grind grain. One prisoner, who had earned fifty dollars working overtime shoemaking, bribed a keeper with half the money to help him to escape. That was in 1827, and only a single night remained before the prison was to be abandoned, and the prisoners removed to Wethersfield. Far down in the mine was a well brimming full of pure cool water, twenty-six feet deep. Above the well was an open shaft down which the bribed keeper let a rope on that last night. The prisoner gripped it and was drawn up, but when nearly to the surface the keeper cut the rope, and the prisoner plunged down into the well and was drowned.

Iron of exceptionally fine quality was early discovered at Salisbury in the northwestern part of the state. The deposits were abundant, and the supply of wood, then the universal fuel, was plentiful. For a long time the making of nails from this iron was the principal home industry of the Connecticut colonists. Much of the iron used for the weapons of the Revolution came from there. Cannon were made from it for

the army and navy, barrels for the muskets, and heavy chains to bar the rivers.

In this vicinity is Bear Mountain, the highest point in Connecticut. Its summit is 2355 feet above the sea level.

One of the first of Connecticut's inventors to win fame was David Bushnell, who was born on his father's farm in the little coast town of Westbrook. He prepared for college after he reached manhood, entered Yale at the age of twenty-nine, and graduated just as the Revolution was beginning. Then he turned his

Bear Mountain, the highest in Connecticut

attention to making what was a forerunner of the submarine. He called it the *American Turtle.* It

was seven and one half feet long and nearly as wide, and there was just space enough inside to contain one man. The man propelled it by working paddles with his feet. Under the keel was ballast which could be lowered to act as an anchor. A compass was carried to aid in steering, and a barometer to determine the depth below the surface. The boat could be made to descend by admitting water through a valve, and to rise by expelling the water with a pump. The supply of air was sufficient to last the man half an hour. There were windows of heavy glass, and phosphorus was used to obtain additional light. At the stern, above the rudder, was a receptacle which contained one hundred and fifty pounds of powder. This could be attached to the bottom of a ship, and a mechanism inside exploded the powder after a certain interval.

The inventor thought the entire British navy on our coasts could be blown out of the water. The first trial of the turtle was made in New York harbor. A sergeant set forth in it and got under the British man-of-war, *Eagle*, but did not succeed in attaching the magazine to the bottom. He had started to return when he fancied that the enemy had discovered him, and in his alarm he cast off the magazine. It was timed to explode in an hour, which it did, much to the consternation of the British.

Later Bushnell himself tried to blow up a man-of-war anchored off New Haven. He failed to do so, but

did succeed in blowing up an enemy schooner which lay just astern of the larger vessel, and three men were killed.

Soon after the Revolution Eli Terry of Windsor made some small-sized wooden clocks to hang on the wall, and presently he hired two men to help in their manufacture. The case, the dial, and various other parts were of wood, and some of the work was done with a jack-knife. There was often difficulty in getting just the right kind of wood, and when it was obtained it required many months' seasoning before it could be used.

Twice a year Mr. Terry would pack up some of the clocks and make a journey to peddle them at twenty-five dollars each. In 1807 he and some associates bought an old mill at Waterbury to get the aid of machinery in the clock-making. A few years later an apprentice introduced a circular saw. This helped reduce the cost of manufacture and the price, and peddlers sold the clocks in all parts of the Union.

The clock with brass works was invented in 1837, and machine-made Connecticut clocks and watches were soon being exported. Their excellence and cheapness made them favorites the world over.

A remarkable variety of manufactured articles is produced in the state, but brass goods constitute fully one-fourth of the whole in value, and Waterbury is the most noted centre of the industry in America.

When a machine was invented for making pins at

one operation the manufacture was established at Derby, Connecticut, in 1835, because in that vicinity competent mechanics could be found who had gained expertness by working on brass clocks.

Different towns and cities in the state have in a number of instances won a notable reputation for a particular product in which they excel. Thompsonville, north of Hartford, has its great carpet mills; Danbury is America's leading community for the manufacture of hats, and the production of cotton thread and sewing silk has made Willimantic famous.

Some of the Meriden Hanging Hills

One of the important manufacturing towns is Meriden, and not far from the town are the famous Hanging Hills. They are flat-topped, but rise very abruptly from the valley.

Meriden's manufacturing enterprises began in 1791 with the making of cut nails. A few years afterward pewter buttons and dishes were manufactured. Later still the making of silver-plated ware developed into such an industry that Meriden became known as "The Silver City."

Brick-laden schooners on Long Island Sound near Stonington

Along the Connecticut Shore

THE place in Connecticut that has the most inhabitants is New Haven. It is sometimes called "The Elm City," there are so many fine trees of that variety adorning its parks and streets. The first settlers were attracted to it by its excellent harbor. They came in

the autumn of 1637, built a hut, and left a few men to try the winter climate. The main party arrived in the spring, and their minister preached his first sermon there under an oak tree on April 18th.

Two distinguished fugitives found refuge in New Haven early in the year 1661. They were Generals Goffe and Whalley who had been members of the court that condemned King Charles I of England to death. Now Charles II had come to the throne, and a price was set on the heads of these two "regicides." Officers were sent from Boston to arrest them, but found their errand blocked at New Haven by the most exasperating obstacles. Their documents were read aloud in public meetings instead of being treated as secret-service business, and when the Sabbath came the minister regaled them with a sermon from the text: "Hide the outcasts; bewray not him that wandereth; let my outcasts dwell with thee, Moab; be thou a covert to them from the face of the spoiler."

Every precaution was taken to conceal the regicides. They moved from one house to another, they hid under a bridge over which the searchers passed, they were for a time in the woods, and for a time in an old mill. Then they went to the top of West Rock, a steep crag about two miles from the town, where a cave was prepared for them in a pile of rocks. There they continued for several months. After that they dwelt in Milford, in great seclusion, for three years. Finally, news of their being in that place got to the

king's officers, and Connecticut seemed no longer a safe retreat. So they went away, travelling only by night, to the frontier village of Hadley, in Massachusetts.

New Haven is the home of Yale University, one of the oldest, largest, and best-known of American educational institutions. The need of a college was felt in Connecticut almost from the first, but it was generally agreed that the resources of the whole of New England were barely enough to support Harvard. At length, however, in 1700, ten ministers met at Bran-

New Haven Green

ford and each laid on a table a contribution of books, saying, "I give these books for the founding of a college in this colony." The whole number was about forty volumes.

The next year the General Court voted the a small grant of money, and Saybrook was cl the place where it was to be established. But its first rector was the minister at Killingw library and students were housed there. Th mencements, however, took place at Saybrook. The college had just one student for the first six n the and the total number of graduates in fifteen ye was only fifty-five. For instruction the early pupils were largely dependent on the ten ministers wh trustees.

After a while the rector died, and the libra some of the students were transferred to Say Other students went to Milford where the new r lived. Finally, in 1716, the trustees voted to r the college to New Haven. Meanwhile good f ends in England had been contributing books and money to help it along. One of these benefactors was Elihu Yale, who was born at New Haven in 1648, but who, when ten years old, had been taken to England by his father, and had never returned. He became a wealthy merchant, and for a time was a government official in India. His gifts in money to the college amounted to £400, and the trustees gave the college his name.

The locating of the college in New Haven was the cause of much dissatisfaction, for several other towns thought they had a better claim to it. A portion of the students seceded, and for two years were taught at Wethersfield. Saybrook protested against the re-

of the library. In the night, the wagons on he books had been loaded ready to start in the were broken, and the horses that were to draw were turned loose, and bridges on the New turnpike were cut away. When the library at last reached its destination, many of the books were

One of the most interesting of the colonial members of the faculty was Rev. Naphtali Daggett, who for a of a century was the college preacher. On y, July 5, 1779, the townspeople had begun to ate the Declaration of Independence, when they thrown into consternation by the news that a f forty-eight vessels had dropped anchor at West n, and that three thousand men were marching against the town.

Hasty levies made ready to oppose the enemy, and the college preacher joined them. His comrades no sooner came within range of the British bullets than they took to their heels, but he stood his ground, and, though wounded, loaded and fired until a detachment charged and captured him. The officer in command inquired, not very gently, "What are you doing here, you old fool, firing on his Majesty's troops?"

"Exercising the rights of war," he replied grimly.

Here is what happened to him afterward in his own words: "'Midst a thousand insults, my infernal driver hastened me along farther than my strength would ad-

mit in the extreme heat of the day, weakened as I was by the loss of blood, which could not be less than a

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A few of the three hundred and sixty-five Thimble Islands, between New Haven and Guilford

quart. When I failed in some degree through faintness he would strike me on the back with a heavy walking-staff, and kick me behind with his foot. At length, I arrived at the Green in New Haven and obtained leave of an officer to be carried into the Widow Lyman's and laid on a bed, where I lay the rest of the day and the succeeding night in such acute pain as I never felt before."

The town was given up to plunder, but the British retired after being in it only overnight.

At the outbreak of the Revolution Benedict Arnold was a New Haven druggist and bookseller with a shop

near the Green. When news of the Battle of Lexington came he mustered a little company of patriots and led the way to the powder house where he demanded and received the keys.

The nineteenth of May, 1780, was the famous "Dark Day." The Connecticut Legislature was in session in the old State House on the Green when the sudden darkness fell. Many believed the Judgment Day had arrived. In the midst of the excitement a motion was made to adjourn. Then Colonel Davenport rose, and said: "I am against an adjournment. If this is not the Day of Judgment there is no cause for adjournment. If it is, I choose to be found doing my duty. I wish, therefore, that candles may be brought, and we proceed to business."

The darkness began in the middle of the morning and continued the rest of the day. Persons were unable to read common print or to tell the time of day by their clocks and watches. The birds sang their evening songs and became silent, and the fowls retired to roost. Clouds covered the sky, and a southwest wind blew. The air had a brassy hue, and it is probable that the darkness was caused by the smoke of a forest fire.

In colonial days a good deal of New Haven's energy was directed to the export of meat and lumber to the West Indies, but in more recent times manufacturing has been its leading interest. The New York and New Haven Railroad has its main offices and con-

struction and repair shops in the city, and gives support to a tenth of the people.

One of the greatest of New Haven's contributions to industry was the inventor, Charles Goodyear, who was born there in 1800. His father was a hardware merchant, and when he was old enough he engaged in the same business. But he failed, and his health broke down, and often afterward he was imprisoned for debt. He spent ten years experimenting with rubber to make it available for waterproof shoes, clothing, and other articles. People thought he was crazy. A stranger who was inquiring what he looked like received this reply. "If you see a man who wears a rubber coat, cap, vest, and shoes, and has a rubber purse without a cent in it, that is Charles Goodyear."

He even pawned his children's school-books to get money to buy rubber for his experiments. At last, when he one day had a mixture of sulphur and rubber on the kitchen stove, he chanced to subject it to just the right intensity of heat, and achieved success. After he had patiently perfected his discovery and adapted it to different uses, sixty patents were required to secure his inventions. However, because of fraud and mistakes and lawsuits, he gathered little from his years of toil and privation except the honors awarded to his skill and perseverance. He gave to the world a staple now applied to hundreds of uses, and employing many thousands of workmen in its manufacture.

A harbor view of Bridgeport

Another great industrial city on the Connecticut coast is Bridgeport. Here are made such articles as pianos, sewing machines, toys, ammunition, cutlery, and typewriters.

This was the home of P. T. Barnum, whose "Greatest Show on Earth" had a world-wide fame. The successor to his circus still has its winter quarters in the city. "General Tom Thumb," one of the notable attractions of the "Greatest Show," was born at Bridgeport in 1838. When first exhibited he was less

"Tom Thumb" and his wife, who were noteworthy attractions in P. T. Barnum's "Greatest Show on Earth."

than two feet high and weighed sixteen pounds. Later he increased somewhat in height and grew stout.

Benjamin Franklin often used to pass over the old post road along the coast between Philadelphia and Boston. Once he stopped for the night at a tavern near Saybrook. The weather was frosty, and when he went in he found all the space before the blazing fire occupied by a group of village politicians swapping news. Thereupon he ordered the landlord to give his horse a peck of oysters in the shell. The entire company of villagers went out to see the miracle of a horse devouring oysters. When the landlord returned with the announcement that the horse refused to eat the oysters, Franklin was found comfortably seated in the warmest corner quite willing to make a meal of the oysters himself.

A stream which was the original west boundary of New London was the scene of a very odd incident toward the end of winter in 1646. A young Saybrook couple wished to be married, and as the magistrate in their own place was away they sent word to Governor John Winthrop at New London that they would ride thither to have him perform the ceremony. He concluded to ride to meet them. Both he and the wedding party got as far as the boundary stream, and found it in flood and the ice broken up. They could not cross, but the marriage took place just the same. The governor on his side of the stream pronounced them man and wife, and they on the other side promised to love,

honor, and obey. Since then the stream has been called "Bride Brook."

Winthrop had a gristmill in a rocky glen near New London, and on that spot a gristmill still stands with a great waterwheel on the outside of the building. It is one of the most interesting colonial relics in New

The old grist mill at New London

England. This mill was erected in 1712, and even now it continues to grind as of old.

New London had a thriving West India trade during the half century that preceded the Revolution. Its cargoes for export mostly came from the region north and west, and this same region absorbed the larger portion of the imports. Some of the heavy wagons that transported the goods to and from the

town were drawn by oxen, and others by horses. Four animals were hitched to each wagon. It was nothing uncommon for a hundred of these big creaking vehicles to arrive from widely scattered points and pass in procession down the town streets, raising suffocating clouds of dust. The teamsters were muscular, red-shirted fellows, each armed with a long whip, which he would now and then flourish in a way to make it snap with a report like a pistol.

The wagons brought wheat and peas in bags, corn in barrels, casks of hams, pork, and beef, savory cheeses, pots of butter, and piles of staves and hoops for making barrels. After the loads had been delivered at the docks the drivers would assemble at a near-by tavern. There they would indulge in merry carousals, and in the evening would perhaps parade the streets in noisy bands to the great dismay of the order-loving citizens. The next morning they would load their wagons with sugar, molasses, and other goods, and drive off homeward.

The place fared badly in the Revolution. Not only did commerce come to a standstill, but in September, 1871, Benedict Arnold, whose birthplace was only fourteen miles distant at Norwich, arrived with a British fleet, and burned the town's dwellings, warehouses, and shipping.

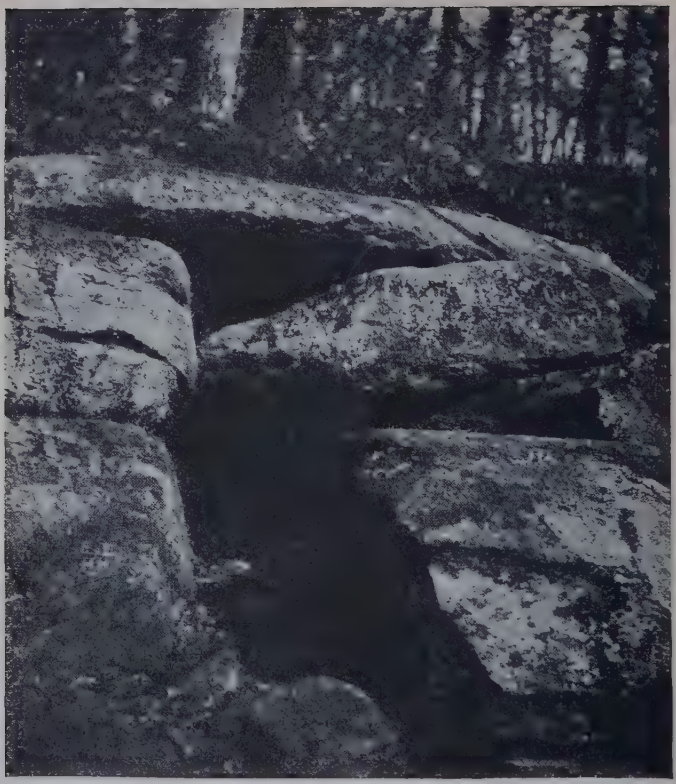
The town was rebuilt, but the old sea traffic failed to revive. Brown sea-moss gathered on the unused wharves, great ships lay idly at their moorings until

they fell to pieces with age and neglect, and the only occupants of the waterside warehouses were rats and cockroaches.

Then came a period when the town engaged in the whaling industry, and New London vessels voyaged to the remotest seas. Keen eyes were ever on the watch for returning whaleships, and if one arrived which was long overdue, or had been reported lost, the church bells were rung. When she reached the wharf a crowd, mostly of women and children, were there to greet her.

Along the entire Connecticut coast many people are engaged in the planting of oyster beds, and dredging for oysters. The sheltered waters of Long Island Sound favor the growth of oysters, and nearly all the bottom on the Connecticut side is privately owned, and devoted to oyster culture.

When oysters are young they are quite active and swim about freely in the water. Presently, however, they go to the bottom, attach themselves to rocks or other hard objects and grow shells. Therefore, it has come to be the practice to scatter mother oysters over selected portions of the salt water shallows, and at the spawning season to spread the same ground with boat loads of old oyster shells to which the young oysters may fasten. For the rest of their lives they remain in the same position, unless accident or the rake of an oysterman dislodges them. The methods adopted have resulted in the growth of great numbers of oysters where formerly there were few.



Putnam's Wolf Den

Connecticut Places and Famous People

THERE are several queer irregularities in the Connecticut boundary line. The line was fixed by commissioners, of whose work at a certain stage the famous lawyer, Rufus Choate, said: "They might as well have decided that the line between the states was

bounded on the north by a bramble bush, on the south by a bluejay, on the west by a hive of bees in swarming time, and on the east by five hundred foxes with firebrands tied to their tails."

The eastern line, which follows the crooked course of a small river for a few miles back from the coast, was the result of long wrangling which almost led to the use of force. Various shifts were made in the northern line, and even now it has a curious jog due to careless sur-

The Lake of the Three States, where the boundary lines of Connecticut, Massachusetts, and New York meet. Each of the distant mountains is in a different state

veying. The irregularities of the western line are more or less the result of chance and primitive conditions.

Hartford is the capital of the state. It is a great trading and business centre which owes much of its growth to its position at the head of navigation of the Connecticut. There are extensive manufacturing plants in the city, and it is the home of many great insurance companies. Among its important manufactures are pistols, rifles, and machine guns, rubber goods, electrical supplies, bicycles, and automobiles.

A clock tower in a Hartford park

The city is noted for its many parks, fine trees, and handsome residences. A visitor is apt to declare that it is the second most beautiful place in the United States, the visitor's home place, of course, ranking first.

Formerly New Haven and Hartford were both capitals of the state, and the meetings of the legislature were held in each in alternate years, but Hartford has been the sole capital since 1873.

One of the most famous episodes in its history was the attempt in 1687 of the British colonial governor, Andros, to seize Connecticut's charter, which his

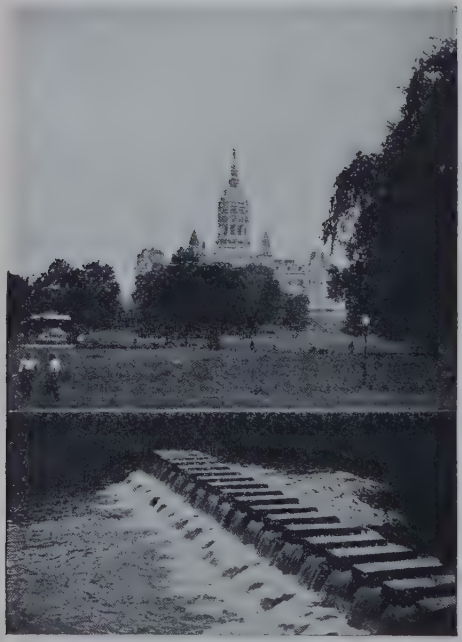
government had concluded was too liberal. He came to Hartford accompanied by sixty soldiers to enforce his demand for the charter. The colonial assembly met him in the meeting-house and its members explained at great length how dear the charter was to them, and how reluctant they were to give it up. Evening came and candles were lighted. The case had become desperate for the colonists. They had been compelled to bring in the charter, and there it lay on the table before the eyes of Andros. Suddenly the lights were blown out, and Captain Wadsworth of Hartford slipped out of the meeting-house with the charter and hid it in a big hollow oak tree near by. When the candles were relighted the assembly was no longer able to comply with Andros's demand.

The Charter Oak, in which Captain Wadsworth hid the colonial charter

Two years later a new king came on to the British throne, and Connecticut resumed its government under the old charter. This charter still exists and is one of the chief historical treasures of the state. The oak tree survived until 1856, when its venerable trunk was prostrated in an August gale. It measured

twenty-one feet in circumference at a height of seven feet from the gound.

The first American woolen mill was started in Hartford in 1788, and some of the cloth woven in this mill was made into a suit which George Washington wore when he was inaugurated President at New York the next year.



Connecticut's State House

New England is famous for its woolen goods, but only a small number of sheep are now kept in its pastures. Most of the wool comes from Ohio and states farther west, and from Australia. When it has been washed and freed from such things as burs and sticks, it is untangled and combed out straight, Afterward it is twisted into yarn. The yarn is woven into cloth for

men's suits and overcoats, and is used for blankets, stockings, carpets, and many other articles. Nearly all of our garments are made of either wool or cotton, or the two mixed.

Hartford is indebted for one of its most important industries to the inventor, Samuel Colt, who was born in that city in 1814. At the age of sixteen he ran away to sea and voyaged to India. On this voyage he made a wooden model of what won world-wide fame later as "Colt's Revolver." A company which started its manufacture failed, and not until a demand was created by the Mexican War did the present great firearms company begin its successful career.

Mark Twain, one of the world's greatest humorists, wrote most of his famous books in Hartford. The city was his home for nearly all his life after 1871.

Noah Webster of dictionary fame was born at West Hartford in 1758. For the first fifteen years of his life he lived at home, attended the village school, and did the usual work which falls to the lot of a farmer's son. After that he fitted himself for college and went to Yale, where he graduated in 1778. His father then gave him an eight-dollar Continental bill, worth at the time about half its face value in specie, and told him he must henceforth rely on his own exertions. So he resorted to school teaching, at first in Hartford, and later in other places.

About this time he compiled his famous blue-covered spelling-book, the most widely used school-book ever

published. Its sales for a considerable period were over a million copies a year, and during the twenty years that Webster was engaged in preparing his dictionary the profits from that one little school-book furnished the entire support of his family, though his copyright receipts were less than one cent a book.

Noah Webster, whose dictionary is famous the world over

In 1798 Webster became a resident of New Haven and there began work on his dictionary. He died in that city at the age of eighty-five, while busy on a second revision.

That greatest of colonial theologians, Jonathan Edwards, was born at South Windsor in 1703. His father was pastor of the church there for sixty-three years and served nowhere else. Jonathan was one of eleven children. He was the only boy. The girls all grew to a height of six feet, and their father used to speak of them jocularly as his sixty feet of daughters. Jonathan studied Latin at eight years of age, and at thirteen entered Yale, where he graduated four years later with the highest honors. When he was nineteen he began to preach.

Litchfield was the home of another famous ministerial family. Lyman Beecher, one of the foremost

American preachers of his time, was pastor there for sixteen years beginning with 1810. He had thirteen children, seven of whom were sons, and these sons all became preachers. The most famous of the seven, Henry Ward Beecher, was born at Litchfield. As a boy he had little aptitude for study and wanted to go to sea. Instead, he continued his education and graduated at Amherst College. He won no laurels in the routine college lessons, but displayed marked ability in writing and debating. For most of his life he was pastor of Plymouth Church in Brooklyn, where his congregation was one of the largest in the United States.

Harriet Beecher Stowe, the author of "Uncle Tom's Cabin"

His sister, Harriet Beecher Stowe, the novelist, was also born at Litchfield. She for a time taught school in Hartford, and in 1864 became a permanent resident of that city.

An entertaining incident in Litchfield's history occurred on a pleasant September morning in 1780 when General Washington passed through the place. One of the local residents was Appleton Kilbourne, a methodical farmer, who probably never went ten miles from home in his life. On the morning mentioned he mounted Dobbin and started for the mill with a couple

of bags of grain. He was passing a tavern at a corner when a friend called out, "Hi, Uncle App, you're a little too late!"

"Too late for what?" Uncle App asked.

"Why, General Washington and his escort have just left here," was the reply. "Look to the westward — there they go."

Uncle App at once urged Dobbin in that direction at full speed, the bags flopping with every bound of the horse, and the rider's coattails streaming out behind. He passed the military procession, then suddenly wheeled his horse, and confronted the chieftain.

"Are you General Washington?" he inquired.

"I am, sir," Washington replied.

"God Almighty bless you!" Uncle App exclaimed waving his hat in the air. Then he quietly pursued his way to the mill.

One of Connecticut's heroes of the Revolution was "Old Put," as General Israel Putman was affectionately called. He came as a young man, shortly after his marriage, to the eastern part of the state and settled in what is now the village of Brooklyn. In a few years he had a comfortable home and well-fenced clearings. Many sheep were kept in the region, and these suffered from the ravages of a certain she-wolf. Her footprints were easily recognized, for she had at some time been caught in a trap and escaped by leaving the toes of one foot behind. At last Putman entered into

an agreement with five of his neighbors to watch for and follow the wolf until she was killed.

They began the pursuit immediately after a light fall of snow at the opening of winter. Over the hills through forest and swamp they went until the wolf entered a den in the rocks. Here a guard was set, and a crowd of men and boys assembled with dogs and guns, straw and sulphur. A fire was made in the mouth of the cave, but the smoke and fumes escaped too readily from the crevices to be effective.

"Satan's Kingdom," a wild section in the western part of the state

The hours passed until nearly midnight, and then Putnam announced that he would go into the cave to investigate. After fastening a rope to one of his legs and ordering those outside to pull him forth when he signalled by kicking the rope, he took off his coat and vest, and, armed only with a torch, crawled in at the opening. He had advanced about twenty feet when he saw the glaring eyeballs of the wolf at the farther end of the cavity, scarcely three yards distant. A

hearty kick at the rope caused his friends to hastily pull him out, much to the detriment of his clothes and person. But he at once called for his gun, and back he went. As soon as he was near enough to see the wolf distinctly he took aim and fired. The concussion and the smoke almost overpowered him, but the crowd outside hauled him forth into the open air, where he quickly revived. Then for a third time he entered the cave. He found the wolf dead, seized her by the ears, kicked the rope, and out he was dragged with the wolf in his wake.

General Putnam's plough

News of the Battle of Lexington reached Putnam while he was ploughing in an outlying field, two miles from the village. When the mounted courier came along beating a drum at intervals and calling out the news to such persons as he saw, Old Put unhitched his oxen from the plough, and bade one of his boys, who was with him, to go home and tell Mrs. Putnam that he had gone to fight the British. Then he mounted his horse, on which he had ridden to the field that morning, and dashed away toward Boston.

He was noted for his energy and courage. The scene of one of his most daring exploits was the old town of Greenwich in the extreme southwestern corner of the state. A peninsula which reaches out on the west side of Greenwich harbor was used as a pasture for horses in the early days, and a settlement which grew up in its vicinity was called Horseneck. On the summit of a steep hill there, a little church was built. Putnam was in this region with a small force in February 1779 when a British foraying party of over two thousand cavalry and foot soldiers was discovered approaching.

To oppose them Putnam had only one hundred and fifty men and two pieces of artillery. He stationed his force on the brow of the steep rocky hill near the church, and when the enemy drew near received them with several well-directed volleys. They prepared to charge, and Putnam ordered his men to retire. He himself lingered until the British cavalry was close at hand. The road down the hill was circuitous, and time was precious. A path furnished a short-cut. This had been made by people walking to the church, and they had placed stones somewhat irregularly in the path to aid them in climbing. Down this steep path Putnam urged his horse, greatly to the amazement of the British cavalrymen, not one of whom dared make such a hazardous descent. They discharged their guns at him, but he was unharmed. One bullet, however, passed through his hat, and he turned

and shook his fist, shouting, "I'll hang ye to the next tree when I catch ye!"

Greenwich is no longer a rustic village, but a place of splendid residences, in park-like surroundings. It claims to number among its dwellers at least seventy millionnaires.

A Connecticut hero of the Revolution, whose fame is no less permanent than that of Putnam, is Nathan Hale. He was born at Coventry in 1755. Although a delicate child he grew up to be fond of outdoor life and became a strong, athletic lad. While attending Yale College he broke the college record for jumping. He graduated at nineteen and began teaching school. When the Revolution began he promptly joined the army and soon attained the rank of captain.

In September, 1776, Washington needed a spy who would enter the British lines and learn all he could and return with the information. Hale volunteered for this duty, and crossed from South Norwalk, Connecticut, to Long Island in a sloop, and made his way to New York, which the British then held. He was disguised as a schoolmaster, and wore a plain brown suit and a broad-brimmed round hat, and took along his diploma. His mission was entirely successful until he had returned to the place on Long Island where a boat was to meet him. There, at the last moment, he was captured and the records of what he had learned as a spy were found below movable cork soles in his shoes. Soon afterward he was taken early one morning to an

orchard on Manhattan Island, a rope was adjusted around his neck, and the officer in charge said to him, "You may make your last speech."

With a clear strong voice, Hale responded, "I only regret that I have but one life to lose for my country."

One of the villages not far east from the Connecticut River in its lower course is Moodus, a place that is famous for its peculiar noises. Strange subterranean sounds have been heard in the region from time immemorial. The town's first minister, writing in 1729, says he had "heard the noises coming from the north like slow thunder, until the sound came near, and then there seemed to be a breaking like the noise of a cannon shot, which shakes the houses and all that is in them."

"The Old Leather Man," who wore a suit that was all made of leather

Perhaps the oddest person who ever dwelt in the state was "The Old Leather Man." He was born in

France, and as a boy was apprenticed there to a tanner. He proved so capable that he at length assumed charge of his master's business. About the same time he fell in love with his employer's daughter, but her parents opposed the match and he came to America. That was in 1860, when he was about twenty-five years old. He avoided people and became a solitary rover. His clothing was all of leather. It was made principally of old boot-legs, closely sewed together with leather lacing. His shoes had wooden soles and weighed about ten pounds. He had shelters or caves to which he resorted at various places among the rocks on the lonely hills. In them he slept on a bed of leaves with a log for a pillow. He had a regular route between the Connecticut and Hudson rivers, over which he went about once every three months, stopping at each shelter several days. When the local people saw his fire burning at night on the hills they would remark, "The Old Leather Man is around again."

The rustling of his leather suit was likely to be heard before he was seen. He would stop at houses where he had been treated kindly, and seat himself on the doorstep, never uttering a word. If spoken to he would look up and smile. When food was given to him he ate what he wanted and put the rest in a large leather pouch that he always carried. In March, 1889, he was found dead in one of his shelters.

A gate decorated with bones from the jaw of a whale

The Story of Block Island

BLOCK Island is one of the most popular of the New England shore resorts. It is about eight miles long and three wide, and is twelve miles from the Rhode Island mainland. The island was discovered in the year 1524 by a French voyager, who

says, "It was well-peopled, for we saw fires all along the coast."

The Indians called it Manisses. It gets its present name from Adrian Block, a Dutch navigator, who visited it in 1614.

The native inhabitants were a vigorous race, and they engaged in perpetual wars with other tribes. One moonlight night the Mohegans of Montauk, Long Island, eighteen miles southerly, came in a fleet of canoes to assail them. The invaders were discovered approaching, and after they had landed and

The Mohegan Bluffs, on the summit of which a party of besieged Indians perished

marched up into the island the Manisseans stole their canoes. Then the islanders followed the Mohegans

and drove them to the lofty bluffs on the opposite shore. The fugitives could retreat no farther, and there on the heights they contrived to dig a trench, in which they crouched and defended themselves with their arrows. They had no shelter, no food, no water, their besiegers were pitiless, and gradually they all pined away and perished.

Another tragedy of the island occurred in the summer of 1636. John Oldham of Watertown, Massachusetts, was trading with a crowd of Indians two miles off shore in his pinnace when they suddenly overwhelmed and killed him. Two boys and two friendly Indians who were with him were made prisoners. Afterward they and a part of the vessel's goods were put into a canoe, and some of their captors paddled away with them toward the shore.

About this time an English vessel somewhat larger than the pinnace arrived in the vicinity, and its commander, Captain John Gallop of Boston, espied the pinnace. The Indians were attempting to navigate it, but they managed so unskillfully that Gallop's suspicions were aroused. He drew nearer and knew it was John Oldham's, and he saw that the deck was full of Indians. There were fourteen of them.

Gallop concluded they had killed Oldham, and he wished to attack them, but he had to be cautious about doing so, for he and the one man and two boys with him had no weapons except two guns and two pistols, and only duckshot with which to load these firearms.

However, they brought their vessel up near the pinnace and fired among the Indians, who stood ready for combat armed with guns, pikes, and swords.

That caused the savages to take refuge under the deck. Then Gallop, after drawing off a little way, returned with a good gale and rammed the pinnace. The blow almost overset her, and the Indians were so frightened that six of them leaped into the sea and were drowned. Again the English drew off. Now they fitted their anchor on the front of their vessel and rammed a second time. The anchor stove a hole in the side of the pinnace, and they delivered another volley.

Four more of the Indians leaped to their death in the sea, and the English boarded the damaged vessel. One of the remaining Indians surrendered, and they bound him and put him in the hold. They captured a second and bound him also, but did not dare confine him with the first lest the two should contrive to release each other. So they heaved him overboard. The only Indians still on the pinnace besides the prisoner were two, armed with swords, who were in a little room below deck. Gallop fastened the door, put what goods the Indians had not carried away into his vessel, and started for Boston with the pinnace in tow. But when night came the wind rose, and he was obliged to turn the pinnace adrift, and it was blown to the mainland shore.

The news of Mr. Oldham's death roused Boston to

prepare an avenging expedition, and, toward the end of September, ninety men set forth for Block Island in three pinnaces. On the day that they arrived at the island there was too much wind and too heavy a surf for them to approach close to the shore, and they had to wade waist deep through the water. The Indians were on the beach to oppose them, and sent their arrows thick about the English. One of the soldiers was wounded in the neck. An officer, writing of his experiences, says: "Myself received an arrow through my coat-sleeve. A second struck my helmet on the forehead, so if God in his providence had not moved the heart of my wife to persuade me to carry it along I had been slain."

As soon as they got to the land the Indians found that the white men's bullets outreached the red men's arrows. So the savages fled to the swamps, and the English scarcely saw them again in the two days that the expedition was on the island. The invaders discovered two villages, and they burned the wigwams, killed some Indian dogs that were prowling around, and cut down the ripening corn. They brought away many well-wrought mats and several handsome baskets. Two Narragansett chiefs later helped them recover the boys who had been on Oldham's vessel.

A few English families settled on the island in 1662. There were then four hundred Indian inhabitants. They recognized the power of the whites, and many of them became slaves in the settlers' families. Con-

siderable anxiety was felt at times lest they should revolt, and when King Philip's War was being fought every Block Island Indian was disarmed at sundown. The weapons were returned to their owners each morning. As the years passed, the Indians steadily decreased in number until, at the end of two centuries, there was only a single survivor.

The first settlers found the island well wooded. Now it is almost bare of trees, except for orchards and planted shade trees. Its soil is naturally full of small rounded boulders left by an ancient glacier, but these have been mostly cleared away and made into hundreds of miles of stone-wall fences.

The island has one great pond and ninety-nine small ones, but springs are entirely lacking, and the largest stream is a little brook.

When the whites had been on the island about seventy years, the diminishing supply of wood for buildings, fences, and fires made the people fear they would have to move elsewhere. Then they began to burn peat, and this soon became almost the only fuel, except as small supplies of wood were obtained from wrecks or brought in boats from the mainland. Some of the peat beds cover several acres.

The peat was called "tug" by the islanders. This name refers to the hard work of getting it from the bogs, where it exists in the form of thick black mud. The mud was shovelled out and loaded on carts. Then it was taken to smooth, dry ground and made into

balls about six inches in diameter with the bare hands. The balls were put side by side on the ground, where they flattened out a good deal on the under side. After drying for two or three weeks they were stacked up in pyramids to dry still more, and finally were drawn in carts to the tug-house in the home yard.

Stoves and coal were introduced on the island about 1845. But thirty years later the poorer families were still using peat, and in very few homes had it been discarded altogether. Its smoke gave forth a pungent odor that plainly informed the passer-by where it was being burned.

At first the island soil was fertile, but after a time it became exhausted, and the farmers began to resort to the shores for the seaweed that was left there by the storms. Men and boys, armed with forks and rakes, would often be at the task before a storm was over, piling up the stranded seaweed beyond the reach of the waves, and reaching for that in the water lest the receding tide or a change of wind should bear it away. Some of the seaweed was spread over the fields and ploughed under, and some was put into the ground with the seed.

The island people never wholly depended on their farms for a livelihood, but spent much time fishing. Even the cold stormy winter did not entirely prevent the fishermen from venturing forth.

Not until almost two hundred years after the arrival of the first settlers did the people go to any trouble or

expense in improving the roads. Lanes here and there, and cart tracks across the meadows and pastures, answered every purpose. The lanes were so narrow in places that teams could not pass each other. Some of the rustic highways went over hills as steep as house roofs, descended into hollows of mud and water, and the wheels were almost constantly jolting over boulders. There were gates to open and bars to take down, but what did it matter? No one was in a hurry.

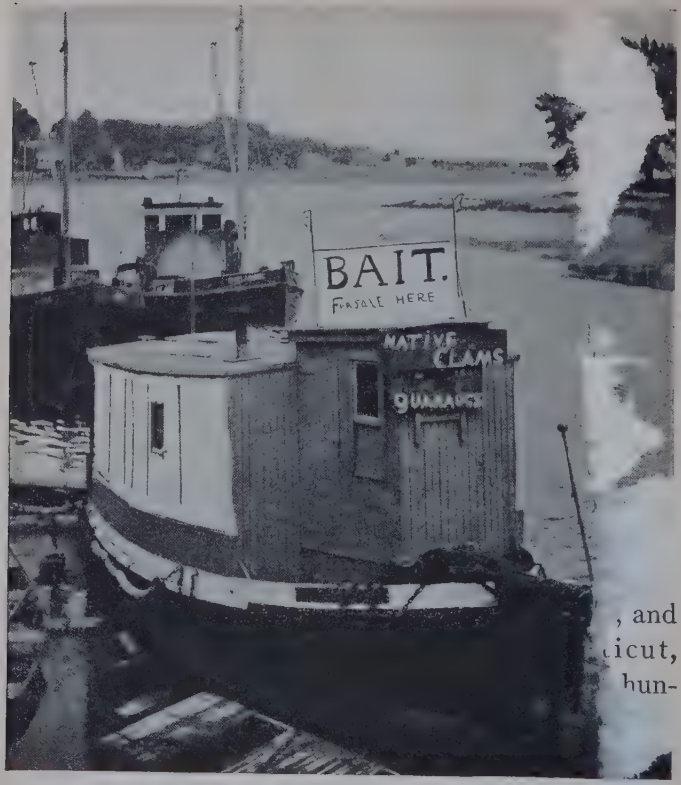
Fishing boats in the old harbor

Fine horses and good saddles for both sexes were owned, and when there was to be a social gathering of young people parties would go galloping around the

hills and through the ravines, jumping fences and leaping ditches, with laughing and shouting, until at last they alighted at some house agreed on. There a feast awaited them, and a fiddler who helped to make the evening a merry one.

A curious tradition of the island is that of the "Dancing Mortar." This mortar was a section of a lignum-vitæ tree fourteen inches long and ten in diameter, and hollowed out at one end to contain about four quarts. In such mortars the early settlers put corn, a handful at a time, and pounded it into meal with a stone pestle. The wood was so hard and crossgrained as to stand almost any amount of pounding without being split or worn. Simon Ray owned the Dancing Mortar. After he and his family died their house was occupied by people of another name, and then for a considerable period it was said to be haunted. That was when the mortar won its name by dancing around the room it was in without any one's touching it, and performing all sorts of strange antics. It would throw itself on its side and roll to and fro, then right itself, and hop up from the floor several times in succession. At least, that is the way the story runs.

The first Block Island hotel was opened in 1842, but not until thirty years later did the island really begin to develop into the popular resort it has now become.



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The waterside at Wickford

King Philip and His Narragansett Allies

NEAR the old Rhode Island town of Bristol is Mount Hope, where that most famous of New England Indians, King Philip, dwelt, and where he met his tragic death. It is a hill rather than a mountain, and its treeless rounded summit is thinly grassed

pastur[illegible]. The most flourishing growths there are huckleberry bushes, goldenrod, and thistles. The mount[illegible]s at the end of a peninsula, and round about are irregular inlets from the sea. King Philip's village was at the foot of a rude crag where there was a good spring, and where it was sheltered from the rough northwest winds.

Phi[illegible]'s father, Massasoit, maintained friendship with [illegible]e whites, sold them land, and fed them when they [illegible]ere starving; but as Philip grew older he perceived the increasing power of the English with alarm. They were overrunning the whole country. At length [illegible]ermined to act, and he journeyed from tribe to [illegible]iciting them to unite against the white men.

[illegible] struggle began in 1675, and many an exposed wait[illegible] village was wiped out, and hundreds of the But[illegible]' lives were sacrificed. Late that year the side[illegible]st battle of the war was fought in the southern [illegible]f Rhode Island not far from Kingston. There [illegible] two thousand Narragansett Indians, including wom[illegible]n and children, had taken refuge on a piece of rising ground, five or six acres in extent, in the middle of a "hideous swamp." They planned to pass the winter on this swamp island, and they erected on it five hundred bark wigwams, which they lined with skins and made bullet proof by piling around the inner sides baskets and tubs full of corn and dried fish. The tubs were sections of hollow trees cut off about the length of a barrel. The Indians fenced in

the island with a strong stockade of logs set on end, outside of which trees were cut down to form a hedge a rod wide. The single door in the palisade was guarded by a block-house, and near by a big fallen tree afforded passage over the encircling water.

A lurking Indian

An army of eleven hundred whites from the colonies of Massachusetts, Plymouth and Connecticut, and one hundred and fifty friendly Indians, prepared to assail this stronghold. Winter was setting in when the expedition started, and the men who had to go farthest were nearly a month on the way. On the eighteenth of December, when they approached the swamp, their provisions were getting so low that they decided to attack the next day.

Fires were built, and by their light guns were cleaned and everything made ready. The troops had no tents, and they slept in the open, with no other blankets than a "moist fleece of snow."

They were up at five o'clock the following morning, and began the toilsome march by a roundabout route to the fort in the swamp. An Indian who had quarrelled with his fellows joined them and was enticed by the promise of a reward to act as their guide. They arrived before the Narragansett stronghold soon after noon of the short winter day. The cold was extreme, and the air was filled with falling snow. Some of the soldiers ran out on the tree trunk which bridged the water opposite the entrance, but were swept off by the bullets of the Indians' guns. More pressed forward only to share the same fate.

But a little party of whites went around to the other side of the island and found a way across the partially frozen swamp up to the palisades. They climbed on each other's shoulders, fought their way over the ramparts, and contended with the Indians hand to hand inside of the fort. More of the soldiers came to their assistance and hacked a breach through the stockade.

Meanwhile the assault at the front had been renewed, and presently the entrance was stormed. All the English were soon in the fort, but the Indian resistance was stubborn, and the assailants could only force the foe back foot by foot. Then the wigwams

were set on fire, and the wind swept the flames through the crowded fort. The women and children fled from the burning huts and mingled their cries and shrieks with the yelling of the warriors. Many were killed and many perished in the flames. The rest escaped to the woods.

At the end of three hours the victory of the whites was complete, and they started on an eighteen mile march in the storm and cold to the little village of Wickford. They had lost six captains and over twenty men, and there were one hundred and fifty wounded. Those of the wounded who were unable to walk were carried on litters made of muskets and saplings. For the first three miles of their journey they were lighted through the woods by the flames of the burning wigwams. It was after midnight when they arrived at Wickford, and twenty-two of the wounded had died on the march. Some of the party lost their way and wandered amid the storm until morning.

About four hundred of the Indians had been killed, including warriors, old men, women, and children. Their provisions and shelters had been burned, and the survivors faced famine in the middle of the winter. The hornets' nest had been destroyed, but most of the hornets were still loose, and the plight of the exhausted troops was little better than that of the foe. Only the timely arrival on the very night after the battle of a sloop loaded with food supplies from Boston saved the little army from terrible suffering.

The war continued the next year, and the English lost heavily in lives and property. But the Indians' loss was far greater, and one by one the confederate tribes abandoned Philip to his fate. When at last his wife and only son were taken prisoners, he exclaimed: "My heart breaks! Now I am ready to die!"

The son was a child of nine. The Puritans, who owed so much to his grandfather, sold him as a slave in Bermuda.

On the seaward slope of Mount Hope, the home of King Philip

Summer came, and Philip with a few followers wandered back to Mount Hope and encamped near it on a knoll in a swamp. There the forces fighting Philip surprised and killed him.

The spot where he met his death has been marked with a stone. If you visit it you will find it swamp still, and probably its appearance has changed little with the passing centuries.

The old stone mill in a Newport park

A City of Pleasure

RHODE ISLAND is noteworthy for the number and importance of its summer resorts. These include Newport, Narragansett Pier, Watch Hill, and Block Island. The first is the most famous fashionable resort in America. It is on an island in Narragansett

Bay. The Indian name for the island was Aquidneck, which means "The Isle of Peace." It is about fifteen miles long, but for the most part is very narrow. The early settlers called it Rhode Island, probably because it was in a bay that furnished good anchorage. The word rhode, or r-o-a-d, as it is more correctly spelled, is used by sailors to designate just such an anchoring place.

Aquidneck's first settlers came in 1636 as the result of a violent theological dispute in Boston. Mrs. Anne Hutchinson, whose teachings were the cause of the disturbance, was banished from Massachusetts. She and some of her friends and partisans bought the island of Aquidneck from the Indians for forty fathoms of wampum, twenty hoes, and ten coats. After residing a few years on the island Mrs. Hutchinson moved to the western borders of Connecticut, where the Indians cruelly murdered her with nearly all her children and servants — sixteen victims in all.

Newport first won fame as a slave port — the greatest in America. For a long time eighteen hundred hogsheads of rum were carried annually to Africa to be exchanged for negroes, gold-dust, and ivory; and numerous distilleries were operated in the town. The wharves were crowded with vessels loading for Guinea. Besides rum a ship would take on board provisions, muskets, and powder, and an assortment of shackles. Presently it would sail, "bound by God's grace for the coast of Africa," as the bill of lading would piously declare.

After the outward voyage ended there was sometimes a good deal of difficulty in securing slaves from the native chiefs; and one Newport captain wrote in 1753, "The trade is so dull it is actually enough to drive a man crazy." About one hundred and twenty captives made a cargo. They were stowed in a space between decks that was three feet and ten inches in height. There the women were given their freedom, but the men were kept shackled. None of the grown persons could stand upright or move about with any comfort.

Slaves were owned for domestic servants by every well-to-do Newport family. They had three failings: they were fond of rum, they would steal, and they would run away. Slave labor in New England was never a source of much profit. Most of the slaves brought across the ocean in the Newport brigantines were sold at Barbadoes, or at Charleston, South Carolina.

At the beginning of the Revolution Newport was commercially more important than New York. The British took possession of it early in the war. On December 7, 1776, eleven square-rigged enemy vessels, together with a convoy of seventy transports carrying six thousand troops, entered Narragansett Bay and dropped anchor. The troops established themselves in and around Newport.

The next summer the Yankees caused a very great sensation by capturing the British commander, Gen-

eral Prescott. He often left his Newport headquarters to stay overnight at the home of a loyalist named Overing who lived a half dozen miles to the north, near the west shore of the island. A regiment of Americans was stationed on the mainland at Tiverton, east of the upper end of the island, and Major Barton, one of its officers, learned from deserters of General Prescott's nocturnal visits. He soon contrived a scheme for kidnapping the general, and set out on the expedition with forty selected men in whaleboats.

On the night of July 9th, they were at Warwick on the west side of the bay, and from there rowed swiftly toward their destination. They had to pass a part of the British fleet, but were not detected. After they landed they tramped a mile to the Overing house, and secured the sentinel on guard. Then they forced the main door and found Prescott sitting bewildered in a lower chamber on the side of his bed. They only gave him time to don his breeches, waistcoat, and slippers, and marched him off with his aide and the sentinel to the boats. He was conveyed safely to Providence, where a day or two afterward there arrived from Newport under a flag of truce his entire wardrobe, including his purse, his hair powder, and a plentiful supply of perfumery. Congress rewarded Barton with promotion and the gift of a sword.

The British occupied Newport for three years. At the time of their exit in October, 1779, their general ordered that the shutters of the town buildings be

closed, and none of the people was allowed on the streets as the troops marched to their ships.

When the British left, the place was only a shadow of its former self. About three hundred houses had been destroyed, and the town was in ruins. Groves and orchards roundabout had been laid waste, and many of the rows of trees which lined the island roads had been cut down.

A Newport letter written in 1822 says, "The wharves are deserted, and the people are now so poor that there

The rocky shore at Newport

are not more than ten or a dozen families who would have the courage to invite a stranger to their table."

The introduction of railroads made the case of New-

port still more hopeless. Other places were better situated for modern transportation on the land and traffic on the sea, and it had no water power to enable it to turn to manufacturing. Many of its people, therefore, went elsewhere to seek a livelihood.

One of the Newport mansions

But about the middle of the century a wave of fashion swept into Newport. The "first families" of Virginia and other Southern states came with servants and horses in their own schooners from Richmond, Charleston, and Savannah to enjoy the summer luxury of a Northern watering-place. Its attractions were a salubrious climate, remarkably mild without extremes of heat or cold the year through, wide ocean prospects from its cliffs, extensive bathing beaches, and a delightful historic afterglow. So, though the huge East

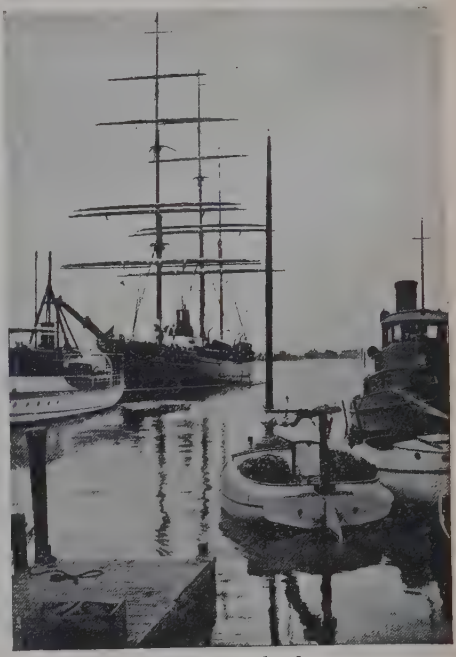
Indiamen and small trim slavers had disappeared, and the wharves and slave pens were falling to decay, prosperity revived.

Since the Civil War Newport has been to a somewhat predominant degree the resort of New Yorkers of wealth and fashion. Their Newport, however, is off on the outskirts of the old town and is a settlement by itself. There the "big-bugs," as they are sometimes called by the humbler islanders, have built their mansions on an upland that juts seaward with a long ragged frontage of cliffs. The offlook afforded is delightful, and the situation is ideal in its breezy summer coolness. A notable attraction of this vicinity is the Cliff Walk, which runs for three miles along the brow of the bluffs that front the ocean. On the landward side are the beautiful grounds and magnificent palaces of the summer colony, and in the other direction you can toss a pebble into the sea.

The arch on the cliff walk

Certain of those who belong to the fashionable Newport set go to astonishing extremes in entertaining themselves. They like to create a sensation, and it

is recorded that in one instance they took a pig out to ride in an automobile in order to do something really "new."



In Newport harbor

The part of the place that was once so flourishing as a seaport, is now a rather quiet and ordinary old village with the narrow streets and quaint crowded wooden buildings characteristic of so many of the colonial towns along the New England coast. One of its streets which impresses the traveller with its name, is Farewell Street, so called because it leads to the cemetery. There is very little of the old sea traffic now, but every evening the place is startled out of its dreams, after the curfew has rung, by the arrival of a huge Sound steamer, which glides along with a subdued

noise of parting waters, and, with its multitude of electric lights, shines like a street in the New Jerusalem. Although the harbor continues to be used by the fishing fleet, costly yachts often outnumber the fishing boats there.

Newport's most widely famed relic of the past is what is known as "The Old Stone Mill" in one of the city parks. It is a low circular tower supported on eight arches. Formerly there was a floor above the arches making a second story to the building. The walls stand firm, and probably are much what they were in the first place. Little is known with certainty about its history except that it was used at one time as a storehouse for hay. But most investigators agree that it was erected for a windmill by an early governor of the colony about 1675. Others, however, claim that it was built by the Norsemen hundreds of years before Columbus discovered America.

Longfellow in his well-known poem, "The Skeleton in Armor," makes it the home of a bold Norse sailor and his bride. This Norseman wooed a "blue-eyed maid" in his native land, but she was a "prince's child, and he only a Viking wild." When he asked to be allowed to marry her, the father's reply was a loud laugh of scorn. Soon afterward the two lovers ran away and put to sea. They were pursued, and they sailed out on the open ocean and continued westward for three weeks. Then they came to land, and there for his lady's bower the Viking built the stone tower

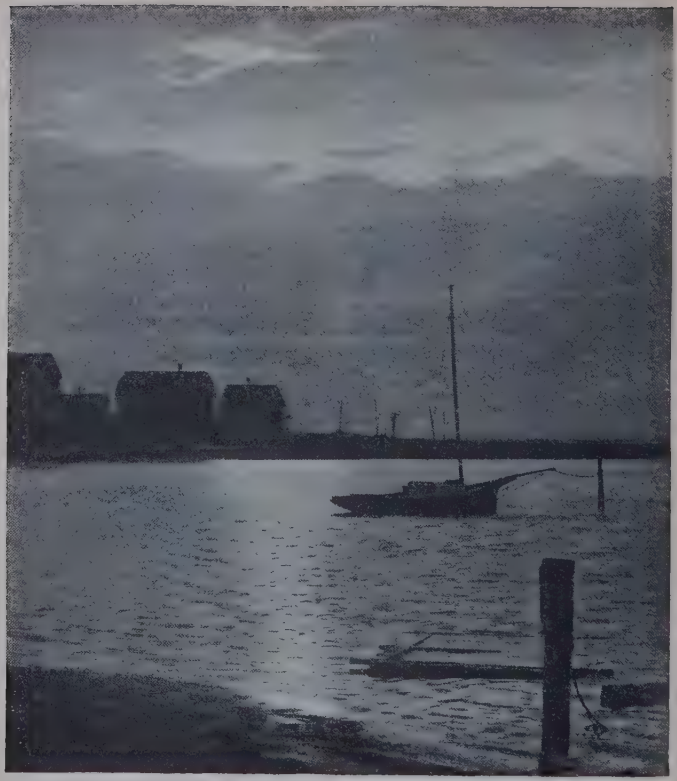
"Which to this very hour
Stands looking seaward."

But at length the lady died, and he buried her under the tower and killed himself by falling on his spear.

The skeleton which inspired the poem was unearthed in digging down a hill near the neighboring city of Fall

United States warships in Narragansett Bay

River. The body had been buried in a sitting posture and was enveloped in a covering of coarse bark. With the skeleton were an oval breastplate and a belt, both of brass, and some brass-tipped arrows in a quiver of bark which fell to pieces as soon as it was exposed to the air. The romantically inclined fancied the bones were those of a Norseman, but more probably they were those of an Indian.



Moonlight at Watch Hill, the popular pleasure resort

The Smallest State

RHODE ISLAND is the smallest state in the Union, and it is the most thickly populated. There are more than five hundred persons to the square mile, while Nevada has less than one to the square mile.

The settlement of the state was begun in 1636 by

that famous Puritan preacher, Roger Williams. He had won considerable fame in England before he came with his newly wedded wife across the Atlantic to Boston, which was just being settled. Soon Salem called him to be its minister, but his preaching aroused such opposition that he was presently banished from the colony. To escape his persecutors he left home at night in midwinter and fled alone through the deep snow to his Indian friend, Massasoit, with whom he stayed until spring. Then he was joined by five of his Salem flock, and they made their way to Rhode Island, where they started a settlement which Mr. Williams called Providence. The name expressed his thankfulness for finding there a satisfactory spot to establish a new home after his wanderings.

The liberty of conscience allowed in the colony made it a popular refuge, and more and more people flocked to it and settled along the shores of Narragansett Bay. There were fresh water meadows and salt marshes that served as pastures for their horses and cows, and on which they mowed grass to make a winter store of hay. The sheep and swine were turned loose in the woods and on the barrens.

Providence for a long time grew very slowly. In 1740 it was much as it had been for a half century previous — a long, straggling street by the water front, where, on summer evenings, the inhabitants sat in their doorways, the men smoking their clay pipes, and they and all the rest fighting the swarms

of mosquitoes that rose from the neighboring marshes.

One of the most noteworthy incidents in the history of the city occurred in that time of irritation between the colonies and the mother country just before the Revolution. In March, 1772, the British schooner *Gaspee* of eight guns took station in Narragansett Bay, and began stopping and searching all incoming vessels to prevent the smuggling of sugar and the evasion of paying taxes on it. This went much against the grain of the colonists, who were insistent that they

The Rhode Island State House at Providence

could not be taxed without their consent. The British admiral at Boston assumed that the Rhode Islanders were "a set of lawless piratical people," and threatened

to hang any of them caught attempting to rescue a vessel from the king's schooner.

Early in June a sloop called the *Hannah*, on her way to Providence, was chased by the *Gaspee* until the latter ran aground a few miles below the city. When the *Hannah* arrived at Providence and reported the plight of the *Gaspee*, some of the citizens plotted to surprise the offending vessel. A number of long-boats were collected, the oars were muffled, and a party of fifty men embarked soon after ten o'clock that night. Presently they came in sight of the schooner and approached her bows so as to avoid her guns. The hail of the single man on watch was disregarded, the crew bent to their oars, and in a few seconds the boats were alongside.

Now the lieutenant in command of the vessel appeared on deck. He called all hands, and some pistols were fired at the boats. Just as he was in the act of slashing with his sword at a number of the attacking party who were climbing into the forechains, he fell wounded by a musket ball. There was no more resistance, the crew was set on shore, and the vessel was burned to the water's edge.

Great was the excitement over this event in the colonies and in England. Rich rewards were promised for the discovery of the perpetrators of the deed, and full pardon for any person in the party who would betray the rest, but without avail.

Many a privateer went forth from Narragansett

Bay to prey on British commerce in the War of 1812. One of these vessels, the *Yankee* of Bristol, made six cruises, captured in all forty prizes, destroyed property

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The beach at Narragansett Pier

to the value of five million dollars, and sent into the home port a million dollars' worth of goods. On one of the cruises the profits were so great that the two negro cabin waiters, Coffee Cockroach and Jack Jibsheet, received for their share about a thousand dollars apiece.

Bristol used to have its whaleships, merchant ships, and brigs. Hundreds of men would be busy at the wharves loading the vessels or hoisting out the oil and hemp and iron, the sugar, coffee, molasses, and other imports. Near at hand were coopers making casks for the whalemen, and blacksmiths making harpoons and chains, and shoemakers making shoes, and tailors making clothing for the sailors. There was a shipyard

where vessels were being built, and sail-lofts where sails were made, and long sheds in which hemp was twisted into ropes. The town still has its shipyard, whence have come the noted yachts that have defended the America's Cup against British challengers. Torpedo boats for the navy are also built at Bristol.

A Bristol wharf

Near the head of the bay oysters and scallops are dredged in the shallow waters, and clams are dug on the mud flats. Lobsters are taken in the deeper water outside of the bay, and there are little vessels that go cruising after fish. Many of the shell-fish and other fish are sent by the steamers or trains to the markets of Boston and New York.

In the warmer part of the year great schools of menhaden appear in the shoal waters about Long Island. These are a small fish, too bony and oily to be valued for food, but large numbers are seined and taken to the factories at Tiverton where the oil is extracted, and the remainder made into fertilizer.

The sea cuts deeply into Rhode Island and there are good harbors near the falls on the streams that empty into the upper end of this inreach. A profitable commerce early developed at the inland harbors, and some of the capital gained was invested in manufacturing at the adjacent falls. The combination of abundant water-power and a convenient situation for sending and receiving goods both by water and by land, has resulted in developing a manufacturing community in the state that for its size is unrivalled in the value of its product. This is what has made Providence, next to Boston, the largest of New England cities.

The population of the state is not very evenly distributed. Four-fifths of the people live at the head of Narragansett Bay and along the rivers that enter it. These rivers are neither large nor long, but they make a rapid descent from a backlying hill country and furnish a great deal of water-power. Manufacturing places are numerous along them, and many hundreds of thousands of people dwell in the single valley of the Blackstone River.

The successful manufacture of cotton in America dates from 1790, when an Englishman who understood

the method of manufacture in his homeland, and who had recently come across the Atlantic, interested some Rhode Island capitalists, and started a mill at Pawtucket. He superintended the making of new ma-

Pawtucket mills beside the Blackstone River

chines, and the firm with which he was associated had for a dozen years the only successful cotton mill in New England. In this same vicinity are now some of the largest cotton mills in the world.

Before the cotton fibre can be spun into thread it has to be freed from the clinging black seeds. This used to be a very slow process. A negro on one of the old-time Southern plantations could work diligently all day picking the seeds out, and only have a pound of cotton to show for his labor. As a result cotton was too expensive to be generally used, and very little was cultivated. But when Eli Whitney invented the cotton gin, a great change took place. A modern gin

can seed fifteen bales in a day, a task which would need several thousand men to accomplish in the old way.

After a bale has reached the mill and been torn open, the machinery first frees the fibre from all dust and dirt and clinging leaves. By means of blowing and beating it is made as clean and fair as the driven snow. Then great rollers studded with fine wire teeth claw at the mass of cotton till the fibres lie smooth and straight in a fluffy white rope. This passes through other machines, and finally appears as a fine cotton thread. The thread is converted into cloth by looms run by water-power, steam, or electricity.

The finished cloth is sent to all parts of the United States, and to many distant countries across the sea. About half the people of the world wear cotton clothes.

Rhode Island continues to be a leader in cotton manufacturing, and among its other important manufactures are woolen goods, machinery, and rubber footwear. Scores of factories in Providence are devoted to making jewelry and silverware, and in this city is the greatest screw factory in the world. The place was at one time a lumber-shipping port, for there was much timber in the region that lay back from the bay and streams. This was uninvaded wilderness for many years after the settling of the watersides, but now the wooded tracts of the uplands and swamps yield little except firewood.

The highest point in Rhode Island is Durfee Hill, which rises 805 feet above the sea level on the northwestern border of the state.

In a Rhode Island field near Newport

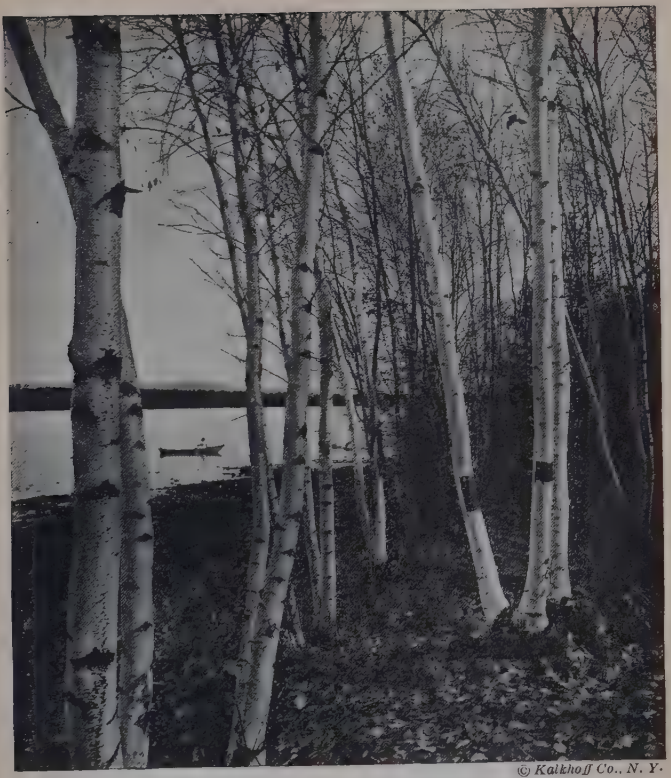
Among the leaders in the Revolution the general who, next to Washington, did his country the greatest service, was Nathanael Greene of Rhode Island. He was born in 1742 at Warwick, about ten miles south of Providence. His father was a Quaker, who owned flour and grist mills, and was a man of wealth for those days, but who thought the only education his sons needed was to learn to read, write, and cipher. This did not satisfy Nathanael, and when he earned money he spent it for books from which to acquire knowledge. At the age of twenty he began to read law and take

an interest in politics, and he helped to organize a body of militia in his home region. As soon as the news of Lexington and Concord reached Rhode Island, he and three others promptly galloped toward Boston to offer themselves as soldiers. The colony made him the commander of its troops, and he served with distinction all through the war.

The birthplace of Gilbert Stuart, the famous painter

Twenty miles down the shore of the bay from Warwick, at North Kingston, was born in 1756 Gilbert Stuart, one of the greatest of American painters. For a good many years he lived in London, where he won a notable reputation. When he returned in 1793 he painted portraits of Washington and other distinguished Americans that in lifelikeness and charm of color could hardly be surpassed.

South Kingston was the birthplace of Oliver Hazard Perry, the most picturesque naval hero of the War of 1812 and the commander of our fleet in the famous Battle of Lake Erie.



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Birches beside Lake Winnepesaukee

Early New Hampshire

NEW HAMPSHIRE and its seaport are indebted for their names to Captain John Mason, an English merchant and shipmaster to whom the region was granted by the king in 1629. The name of the colony was suggested by that of a county in southern England,

where Mason lived for years as mayor of the city of Portsmouth.

The first settlements were made in 1623 at Dover, a few miles up the Piscataqua, and Rye on the coast. A scattered settlement established somewhat later at the mouth of the river received the odd name of Strawberry Bank. Mason sent over implements and arms, food and clothing, cattle, and laborers; and he says, in a letter written in 1634, that for his outlay he had never received one penny.

In 1639 there were four primitive little towns in the colony. Within the next few years these were taken one at a time under the protection of Massachusetts, and New Hampshire did not have a separate organization again until about 1680.

For a long time the leading man of the province was Richard Waldron of Dover, and he was at length made sergeant-major of its military forces. He was largely engaged in trading with the Indians, and though a thorough Puritan in his religion, cheated them at every opportunity. It is said that he did not cross out their accounts when they paid him, and that in buying beaver skins he would use his fist as a balancing weight against the skins put on the opposite side of the scales, and claim it weighed a pound.

After King Philip's War had been in progress a few months, Major Waldron gave the master of a vessel which was about to visit the Maine coast a warrant to seize any Indians he found in those parts. The

result was that the ship-master invited some of the natives on board his vessel and carried them away to sell them into slavery. Their tribe was naturally much enraged.

Another charge against Major Waldron was that he had gone to some of the Indians when they were at peace with the English and taken away their guns, for lack of which several of them starved to death. It was also asserted that he gave drink to certain Indians, and when they were drunk killed them.

Mount Monadnock

But what stirred the Indians most was an occurrence in September, 1776. Philip was dead, and many

savages had strayed northward, and, after preying on the inhabitants of New Hampshire, took refuge with the local Indians who had remained friendly to the whites. A Massachusetts force of one hundred and thirty English, and forty Indian allies, came up to Dover intent on attacking the refugee Indians. But Major Waldron contrived a plan for capturing them by a ruse. At his invitation four hundred of them gathered on the borders of the settlement. The Massachusetts troops, and as many New Hampshire men as could be collected, met the Indians in an apparently friendly way to engage in a sham fight. After going through several manœuvres Major Waldron ordered a grand round of musketry. The Indians promptly discharged their guns, but the English withheld their fire and surrounded and took into custody the entire company without bloodshed. Then two hundred of the lately hostile Indians were selected from the rest and carried off to Boston. Several of them were executed there, and the others were sold into slavery.

The local Indians never forgave this treachery. Twelve years passed, and then they allied themselves with a neighboring tribe for revenge. In the latter part of June, 1688, many of them resorted to Dover ostensibly to trade. Some of the villagers expressed to Waldron fears of an outbreak, but he bade them go and plant their pumpkins, and leave him to deal with the Indians.

There were five garrison houses in the village

which had grown up near Major Waldron's grist and saw mill at the Cocheco Falls. Each was surrounded with timber walls, the gates of which as well as the house doors were secured with bolts and bars. The families in the unprotected houses retired to these garrison houses at night, but no watch was kept. It

An old Dover garrison house that the Indians failed to destroy when they burned many neighboring buildings in 1688

was arranged by the Indians that on the evening of the twenty-seventh of the month two squaws should apply at each of the garrison houses for lodging. Such requests were not unusual, and only at one of the fortified dwellings was admittance refused.

When every one had gone to bed and all was quiet, the squaw visitors opened the doors and the gates, and in rushed the Indian warriors who were waiting

outside. Major Waldron was awakened by the noise, and he hastily pulled on his trousers and seized his sword. Though eighty years of age he met the Indians at the door of his room, and put them to flight, but as he was going back to get other weapons, one of the savages stole up behind him and stunned him with the blow of a tomahawk. Then they seized him, dragged him into his dining-room, put his arm-chair on the long table, and bound him in it. Often in the years past he had sat at the table as justice of the peace settling the disputes of both the English and the Indians.

"Who shall judge the Indians now?" his captors asked.

After forcing the people in the house to feed them, they smote the major with their knives saying with each stroke, "I cross out my account!"

At last they killed him and set fire to the building. In all they burned six houses and the mills at the adjacent falls, and they killed twenty-three persons and captured twenty-nine.

One of the most notable of New Hampshire men in colonial times was General John Stark, the hero of Bennington. He was born in 1728 at Londonderry, where his father was one of the early settlers on what was then the New England frontier. Eight years later the family moved a few miles north to Manchester.

They depended in part for their living on hunting and trapping, and in the spring of 1752 John and his

older brother, William, and two comrades named Stinson and Eastman went in a canoe on an excursion after furs to Baker's River in what is now Rumney in the central part of the state. Late in April, while John was visiting their traps, the Indians surprised and captured him. They wanted him to show them where his companions were, but he led them in the opposite direction.

Unfortunately his friends became alarmed at his absence, for which they did not at first suspect the real reason, and they discharged a gun several times as a signal. That betrayed them to the savages, who turned back and stealthily approached the hunters' encampment. The three men had now concluded that John had fallen into the hands of the Indians, and they were preparing to leave. After the savages had secretly observed what the hunters were doing, they concealed themselves beside the river below the camp. Stinson and William Stark embarked in the canoe. Eastman made his way along the bank, but had not gone far when he was taken prisoner by the Indians. John shouted a warning to the other two, and they paddled for the opposite shore. At once their ambushed enemies fired, killing Stinson, but William got away.

The Indians took their two captives up beyond Lake Memphremagog to St. Francis in Canada, the dwelling-place of their tribe. There they presently compelled them to run the gantlet. The young

warriors, each armed with a rod, ranged themselves in two lines a few feet apart. The captives were to run between these lines from the far end to the council house at the other end. Eastman ran first. Every savage struck at him as he passed along, and he was severely beaten.

Stark, who was more athletic and adroit, snatched a rod from the nearest Indian, and as he ran down the lines struck right and left scattering the savages before him, and escaped with scarcely a blow. The old men of the tribe, who sat a short distance away looking on, greatly enjoyed the confusion of their young warriors.

One day Stark was ordered to hoe corn. He well knew that the Indians regarded such labor fit only for squaws and slaves, and he took care to cut up the corn, and spare the weeds, in order to give them the idea that he lacked skill in unmanly labor. When this experiment did not attain his object, he threw his hoe into the near-by river and told them plainly that it was not the business of a warrior to hoe corn. His spirited action gained him the title of "Young Chief," and he was adopted into the tribe.

Not long afterward he and Eastman were redeemed, and they returned to their homes after an absence of four months. Stark always recalled with pleasure this captivity, and said that he received more genuine kindness from the Indians than he ever knew prisoners of war to receive from any civilized nation. He often

fought them later in the service of his state, and he did his part valiantly in various battles of the Revolution, beginning with Bunker Hill. He died at the age of ninety-four at his home in Manchester, and lies buried there on rising ground that overlooks the Merrimac.

One of the attractive old doorways for which Portsmouth is famous

New Hampshire's leading educational institution is Dartmouth College in Hanover on the Connecticut River. It originated in a plan of Rev. Eleazar Wheelock of Lebanon, Connecticut, for educating Indian youths to be missionaries. He thought that such missionaries would succeed among their fellows better than would the whites, and he began his labor with two Indian lads at his home in Lebanon in 1754. The number of pupils increased until eight years later he had more than twenty under his care.

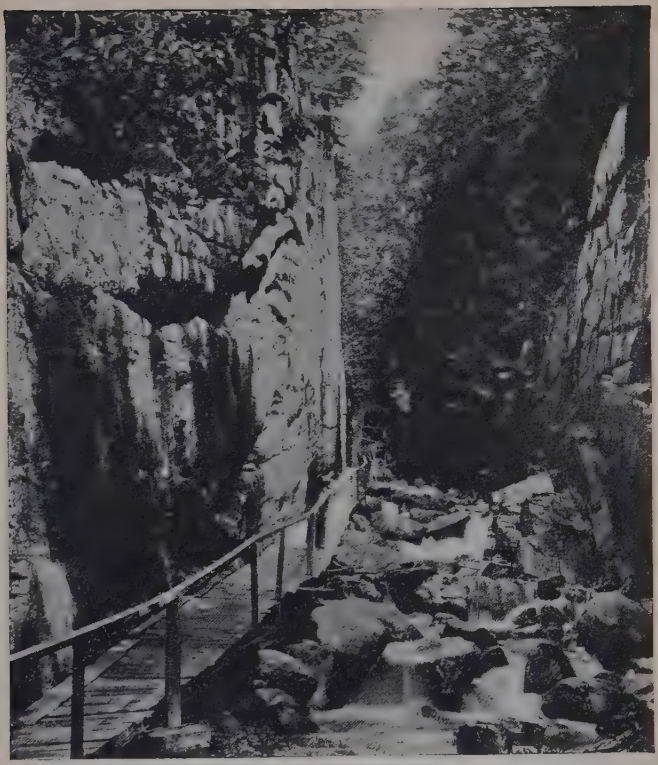
To aid the work contributions were solicited in various parts of this country, and also in England, where the money collected was put into the hands of a board of trustees headed by the Earl of Dartmouth. Presently, when Mr. Wheelock at the request of the governor of New Hampshire, removed to Hanover to establish a

college there, he gave it the name of the English earl.

Mr. Wheelock set out for his new home in August, 1770, and his family and pupils soon followed. The pupils numbered twenty-four, only six of whom were Indians; for his plan of making Indian missionaries had not succeeded as well as he expected. Of forty Indian youths whom he had educated, half had returned to savage life.

The clergyman's family made the northward journey in a coach, and the pupils walked. As they went on, the roads became so bad they could hardly get along. But at last they reached their destination. There, amid a forest of lofty pines on an extensive plain, a few acres of the trees had been felled, and their trunks and boughs covered the ground in all directions. Two or three small log huts had been built, but these were not enough to shelter all the newcomers, and many of them had to sleep several nights on the ground with pine boughs for beds, and sheltered from the dews and rains by a few boards raised over them on poles.

At the first commencement held in August, 1771, the stage was an outdoor platform of rough-hewn boards to which access was afforded by an inclined hemlock plank. The governor of the colony was present with a retinue of forty fine gentlemen from Portsmouth, and an ox was roasted whole on the Green and served to the populace at the governor's expense.



The Flume

The White Mountains

THE Appalachian mountain system, which forms the eastern rim of the great Mississippi basin, extends from Alabama northward through New England and on into Canada. There are many ranges in this system, for the most part running parallel with each

other, and between the mountain ranges are rivers flowing through valleys that are sometimes narrow, and sometimes many miles broad. The highest peaks are in North Carolina, but Mount Washington in the White Mountains of New Hampshire is a close rival.

This New Hampshire mountain group includes no less than twenty bold peaks, and abounds in wild valleys, deep gorges, lakes, and cascades. The Indians held the White Mountains in much reverence, and believed them to be the abode of the Great Spirit. They affirmed that no one who scaled the sacred heights returned alive, but this did not prevent the first European who wandered into the region in 1642 from climbing Mount Washington. He found many crystals, and for a long time the mountains were called the "Crystal Hills." The present name refers to the snow which whitens the bare higher summits for so much of the year.

The first settler among the mountains was a hunter who established himself there in 1792. About ten years later a small tavern was built, but there were no hotels for another half century. After that the region rapidly developed as a summer resort and became known as "The Switzerland of America." Another descriptive title is "The Roof of New England."

Scattered through the mountains are big palatial hotels, and towns and villages almost wholly devoted to caring for warm-weather visitors. One of these villages is Bethlehem, which is higher up and has more

hotels than any other village in New England. At the beginning of the nineteenth century it consisted of a few scattered log cabins, and the settlers' fields were full of dead girdled trees. It lies on a breezy upland slope with a vast panorama of mountain ranges rimming most of the horizon. The permanent inhabitants are only about one thousand, but the summer population is a multitude.

The railroads approach the mountains from different directions, and one passes right through the midst

Franconia Notch

of the group by way of a deep valley called the Crawford Notch. A strange catastrophe occurred in this notch in 1826. An occasional life has been lost in

winter storms, and there have been some serious accidents to travellers on the roads, but no other tragedy

Beside the stream in Pinkham Notch

has the interest of this one in the heart of the Crawford Notch. A rustic inn had been built there, and in it dwelt Mr. and Mrs. Willey, their five children, and two hired men. At dusk, one day toward the end of August, a storm burst on the mountains and raged with great fury through the night. Every tiny stream became a torrent, and the valleys were flooded, and the roads were impassable.

Two days later a traveller succeeded in getting to

the Willey House, which he found standing in woful desolation. An avalanche of earth, rocks, and trees had descended from the mountain and barely missed carrying the house away. When the traveller pushed open the door a dog disputed his entrance and howled mournfully. The lonely cabin had no other inmates. Beside the beds lay the clothing of the members of the household, indicating a hasty and frightened flight. Apparently they had become aware of the danger that threatened and run forth seeking safety only to be overwhelmed. If they had remained in the house, they would not have been harmed, for the avalanche divided a little back of the dwelling and rushed by on either side, leaving the frail structure standing, though some of the débris struck it with sufficient force to move it slightly from its foundations. A flock of sheep that was in the yard in front of the house suffered no harm, but the barn was crushed and two horses in it were killed.

The bodies of all the members of the household except those of three of the children were found later. For twenty-one miles down the valley the turnpike was demolished, and more than a score of bridges were swept away. Some of the meadows were buried several feet deep with earth and rocks, and there were great barricades of trees that had been torn up by the roots.

Thousands of people visit the top of Mount Washington every year. This monarch of the New Eng-

land mountains is over one mile high. As you go up it the trees steadily diminish in size, and at the height of three thousand feet they are not half as large as those in the valley. At four thousand feet they are mere shrubs, scraggly, stunted, and gray with age and shaggy

Mount Washington, the loftiest height in New England

moss. At last, even these pinched earth-hugging birches and spruces find the soil too thin and the warfare with the elements too strenuous, and there is nought but a drear waste of shattered, lichened rocks, with intervals of coarse grass, moss, diminutive blueberry bushes, and a few dainty blossoms. The rock fragments in this blighted upper region look as if they had lain there unchanged for ages.

There is a good road and a bridle-path to the summit, but the climb is long and hard, and most people prefer to ride up on a queer little railway. The railway is in part laid at the surface of the ground, and in part on trestle-work which often passes over deep hollows. There are cogwheels under the engine which fit a heavy cogged rail that is halfway between the other two. This enables the train to ascend and descend safely the steepest parts of the mountain. The machinery is so made that no matter what happens to it the train can be brought to a prompt stop, and not run away down the mountain. The railway is three miles long. When its inventor applied to the legislature for a charter, the scheme seemed so impossible that a member sarcastically moved to give the applicant leave to build a railway to the moon. It was completed in 1869.

A bridle-path was cut to the top in 1819, and the next year some gentlemen stayed on the summit overnight and named the different peaks of what has since been known as the Presidential Range. The names are those of the early presidents, Washington, Adams, Jefferson, Madison, Monroe, and Jackson.

More and more visitors came to the mountains, and in 1853 a house was erected on the summit of Mount Washington. All the buildings there have to be made secure by anchoring with numerous cables and rods. They could not otherwise withstand the fierce gales, for on this bleak height the wind has registered the

amazing velocity of one hundred and eighty miles an hour.

Clouds are apt to hover about the summit, and on the journey up or down you are likely to pass through

The Presidential Range, so called because its peaks bear the names of six early Presidents of the United States

their gray mists. The view from the top is very wide-reaching on a clear day, and Mount Katahdin in Maine can be seen off on the northeastern horizon one hundred and fifty miles away.

Every three hundred feet above the sea level brings the temperature down about one degree, which means a difference of twenty degrees in the case of the summit of Mount Washington. The air there is nearly always cool, and in winter the mercury has been known to go down to fifty degrees below zero.

Aside from the mountains themselves and their wild notches there are several attractions, such as Echo Lake, the Old Man of the Mountain, and the Flume, which every visitor wishes to see.

Echo Lake in the Franconia Notch is a dainty body of water with steep wooded heights rising from its borders. If you stand on the shore opposite the bluffs, your voice or the report of a pistol or the notes of a bugle come back with startling clearness on a quiet day.

Echo Lake

Only a mile away is Profile Lake, from which the woods sweep up a precipitous slope for more than a

thousand feet, and you see near the summit the grim stone features of the Old Man outjutting from a tremendous cliff. The face itself is forty feet in length, but the beholder does not realize its great size at such a distance, and marvels most that it is so strikingly human. The Indians were its original discoverers, and you wonder what impression was made on them by that strange face gazing forth from the brow of the wilderness mountain.

The Old Man of the Mountain

The Flume is an almost straight cleft nine hundred feet long and sixty or more deep. Its perpendicular walls are only a few feet apart, and a little stream rushes down the shadowy depths with much noise and turmoil. The stream enters the upper end of the Flume by a leap from the brow of a precipice in a graceful cascade.

Formerly there was an enormous suspended boulder in the Flume, so firmly wedged between the cliffs that

A camping outfit

it seemed destined to stay there until doomsday. But in 1883 a violent thunderstorm started a landslide up beyond the cleft, and all the rubbish came down through and carried along the boulder. The mass of rocks and earth and trees was deposited some distance below. Whether the boulder was broken into fragments, or whether it lies buried entire in the débris, no one knows.

There are lookout places on the mountains where men are watching for fires all the summer through. The men have telescopes, and their lookouts are connected with the villages by telephone. As soon as they

see the smoke of a fire starting they telephone down, and men are soon on the spot putting it out.

Soon after the beginning of the present century "Old Man Thompson," a famous White Mountain hunter, died at the age of ninety-five. He came to the mountains in his youth when some of the people were

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Morning mists at Dixville Notch

still living in log houses. About 1870 he killed the last wolf ever seen in the region. A man had drawn a dead ox out in his pasture, and Old Man Thompson saw the wolf eating the ox. He set a trap, and caught the creature. He hunted foxes, coons, mink, and marten for their furs. Occasionally he would get an otter, and he secured many a deer and bear.

Bears are shot and trapped in the mountains even

yet. The trapper finds two old logs about three feet apart. Then he puts lighter logs on top to make a kind of fence, and fastens them in place with stakes and wire. He closes one end of the passage, puts some scraps of meat or fish inside at the closed end, and in front of this bait sets a great jagged-jawed steel trap. The trap is not hitched. If it were, and a bear got into it, he would jerk his foot out at his first jump. The trap itself weighs thirty pounds, and has a stout chain five feet long hitched to it, and on the end of that is a three-clawed grapple which drags along and catches on roots and bushes. The bear is not likely to go very far before the grapple compels him to stop, and there the trapper finds him.

Bears usually keep away from villages and farms; and, as they do most of their roving at night, people seldom see them. In the winter they stay in some snug hiding-place asleep, and do not come out until the snow melts off. They are usually fat then, but food is scarce and they become very lean long before the berries are ripe in the summer. Meanwhile they eat roots, and dig up wild turnips, and they tear rotten logs and stumps to pieces to get at the big ants which are inside. If they can make their way into a bee tree, they steal the honey, and they are always on the lookout for yellow wasp nests. In the fall the bears paw over the leaves after beech-nuts. They climb apple trees to get the fruit, and often damage them badly pulling in the ends of the limbs and clawing off the apples.

Falls at North Woodstock

New Hampshire Places and Famous People

THOUSANDS of farmers in New England add to their income by taking boarders who come from the cities, when the summer heat and dust are most trying, to find rest and recreation amid the country greenery. It is a grateful change to people who spend

most of the year in offices, stores, and manufactories. They resort in multitudes to New England's wooded mountains and silvery lakes, its winding rivers with their falls and rapids, its pleasant valleys, and its rocky seacoast. Some stay for only a few days, but others remain for weeks or months.

It is estimated that the summer people leave over five million dollars a year in the single state of New Hampshire. Much of this is spent in the White Mountains, but there are many other favorite resorts

Lake Winnepesaukee

in the state, especially on the shores of the beautiful lakes, such as Sunapee and Winnepesaukee. These

names were bestowed by the Indians. The latter means "The Smiles of the Great Spirit." Winnepesaukee is a very irregular lake with a breadth of from one to twelve miles and a length of twenty. It has three hundred and sixty islands, some only a few square yards in extent, and others having an area of many acres.

Large numbers of people are attracted to the beaches of the state's short shore-line, or to the famous Isles of Shoals, which are among the most frequented of all the New England islands. Lowell describes them as

"A heap of bare and splintery crags,
Tumbled about by lightning and frost,
With rifts and chasms, and storm-bleached jags,
That wait and growl for a ship to be lost."

They are about three leagues off the New Hampshire coast. The largest of the nine islands is a mile in length and half a mile across. On one of them enough ground free from boulders is found for a few acres of mowing, and on another for some garden plots. They are wholly treeless, and support nothing of larger growth than huckleberry and bayberry bushes, woodbines, and wild roses.

The isles were frequently visited by European fishing boats long before New England was settled, and people began to establish their homes on them almost as soon as on the neighboring mainland. There was a rapid increase of population and wealth, and the isles had their

meeting-house and court-house, and a seminary of such repute that gentlemen's sons came from the mainland to it for literary instruction. Swine were numerous, and what is now called Appledore was then known as Hog Island. There was a tavern on Smutty Nose. Hog Island had a good spring of water on it, and a considerable village grew up on its sheltered southerly slope.

Trade, commerce, and fishing were actively engaged in, and the little harbor was filled with shallops and pinnaces. The scene presented at the isles then must have been a picturesque one. On windless summer days the great hulking red-capped fishermen lounged about the rocks smoking their Brazil tobacco and waiting for a breeze, the fishwives chattered at their outdoor net-mending, and the ragged children played boisterous games in the narrow village lanes. By the shores were many long platforms spread with the drying fish, and wisps of smoke drifted upward from cottage chimneys. Roundabout was the wide sea, glistening in the sunlight, and westward were the dim blue hills of the mainland.

When the wind began to blow, the men sailed away in their little vessels, but with the approach of twilight the fishing boats, one by one, came winging home.

By 1700 the isles began to lose their population and prosperity, and of late years they have not had a single permanent family on them except that of the lighthouse keeper. But their healthfulness and the equable

coolness of their summer climate bring to them a swarm of vacation visitors every year.

One of the most charming and unusual of New Hampshire towns is Cornish on the banks of the

Boat landing, Lake Sunapee

Connecticut. It is a place of wonderful estates that have been developed by a colony of artists, authors, and other professional men. The first man of fame to come was Augustus St. Gaudens, the greatest of American sculptors. He remodelled an old tavern into a beautiful dwelling. Later comers in some instances also made over local houses bought of the country folk, and in other instances they built new homes of marvellous architectural attractiveness, and they surrounded their residences with all the enchantment that

landscape-gardening and unspoiled woodland permitted. Their homes are widely scattered about the neighborhood of Blow-me-down Brook in a tumbled region of steep hills and deep valleys, with the giant form of Mount Ascutney looming skyward not far away to the south. It is a secluded spot several miles distant from the nearest railroad station, which is at Windsor across the river.

Formerly Portsmouth, at the outlet of the Piscataqua, was the largest place in New Hampshire, but it has failed to keep pace with the manufacturing cities which

A Portsmouth waterside

use water-power. Thomas Bailey Aldrich, the poet, was born in Portsmouth, and it was there he had the youthful experiences that he relates in his delightful "Story of a Bad Boy." The simple old house in which he lived has been preserved as a memorial.

Another famous man of remarkable originality who started life in New Hampshire was the editor, Horace Greeley. He was born in 1811 in a humble farm-house at Amherst a few miles north of Nashua. His mother was strong and active. She did both housework and fieldwork. She hoed in the garden, could outrake any man in town, and could load hay as fast and as well as her husband. The farmers had to contend against hills, rocks, sand, marshes, and long winters. It gave a stranger a new idea of hard work to see an ox-team ploughing the sides of those steep stony hills. The little boy driver leaped along from sod to sod, the man wrenched the plough around the rocks, and boy and man every now and then united in a yell for the panting beasts to stop when the plough was caught by a hidden rock too large for it to overturn. Yet the town yielded fair returns of rye, oats, potatoes, corn, and young men. It was the last that formed the chief article of export.

Birthplace of Horace Greeley

Horace's name was commonly shortened to "Hod" in his boyhood. He learned to read about as soon as

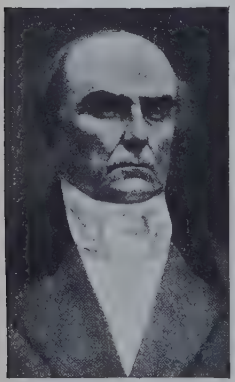
he learned to talk, and at the age of four could read any book in whatever position it might be placed — right side up, upside down, or sidewise. To gain

Mount Chocorua

knowledge was his delight in school or wherever he was. Even when hoeing corn or chopping at the woodpile, if he had a companion, he was perpetually talking about his lessons, asking questions, and narrating what he had read.

But of all New Hampshire's sons the greatest reputation was won by Daniel Webster, who was born in 1782 at the little town of Salisbury about twenty miles

north of Concord. He was the ninth in a family of ten children. There were five boys, and it was naturally expected that they would work on the farm, but Daniel was the youngest and weakest of them, and was not required to do very much. So he had plenty of time for reading, fishing, and roaming about.



Daniel Webster

At a very early age he was able to read with such fluency and charm that the neighbors would often stop at the farmhouse and ask "Webster's boy" to read to them. His selections were always from the Bible, and he read with a dramatic power that held his hearers spellbound.

To prepare for college he went to Exeter Academy. He travelled thither, a distance of fifty miles, "riding double" behind his father in clothes that he had outgrown, and with rustic manners which caused him much mortification at the school. He graduated at Dartmouth in 1801, and soon began to practise law in the rural courts. Within a few years he moved to Portsmouth, the chief commercial place in the state. He was successful there as a lawyer and a politician, but at the end of ten years, when he left it to make his home in Boston, his unpaid debts amounted to thousands of dollars.

In a short time he was recognized as one of Boston's leading lawyers, and was making twenty thousand dollars a year. Yet he had a spendthrift habit which resulted in his seldom being free from an oppressive burden of debt his life through. He had few rivals in public debate and oratory, and his unusual appearance made him a marked man wherever he appeared.

New Hampshire soil, except in the alluvial valleys, is better adapted to pasturage than culture, and the upland farm towns have only a few hundred inhabitants in each. Between 1850 and 1900 the amount of improved land decreased one half, showing that a very large amount formerly cultivated had gone back to pasturage and woodland. However, the state has its fertile sections, where many fine dairy farms are found.

The three largest cities are on the Merrimack. Of these Concord owes its growth in part to being the state capital, but the growth of the other two, Manchester and Nashua, can be credited almost wholly to their manufacturing.

One of the best-known products of Concord is wagons. Here, too, are important granite quarries, but New Hampshire gets its title of the "Granite State," not from the amount of that stone quarried, but from the amount that exists within its boundaries. Some of its mountains, such as Mount Washington, consist almost entirely of granite.

Mica is another product of the state, and in Grafton County are the leading mica mines of the United States.

Cotton goods and shoes each contributes about one-fourth of the total value of New Hampshire's manufactured products. At Manchester is the largest cotton

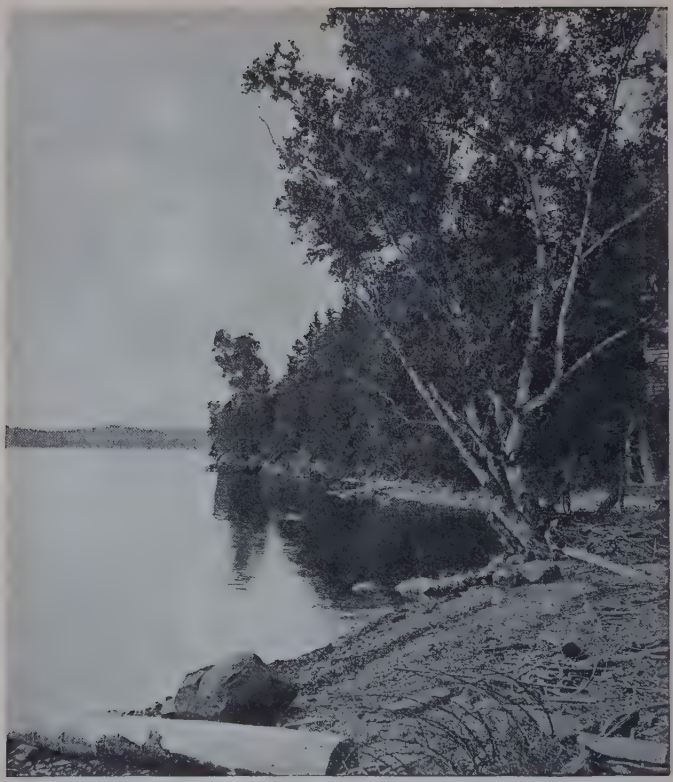
Amoskeag Falls at Manchester

mill in the world. It gets power from the Amoskeag Falls, which have a drop of fifty-five feet. The falls have an Indian name which means fishing-place. This was a great resort of the savages, and the fisheries here were of important value to the early settlers. The shad passing up the falls in the spring are said to have been so numerous that a man could not put his hand into the water without touching some of them.

Many mills have been built on the tributaries of the larger streams, and the railways have either preceded or followed them, for valleys are the natural thoroughfares for the railways. As a consequence the most populous villages are in these valleys. Some of the early mill villages grew up in situations that the railroads could not profitably reach, and in that case both the mills and the villages have usually been

Livermore Falls on the Merrimack River

abandoned. Economical transportation is just as necessary for profitable manufacturing as cheap power.



Lake Memphremagog

Early Vermont and the Green Mountain Boys

IN the colonial wars the predatory parties which moved back and forth between Canada and the frontier settlements of New England followed the waterways. These were navigable almost to their sources by the light birch canoes of the Indians; and in winter,

when they were frozen, they still offered the routes of easiest grade for snowshoes and sledges. At night the northern war parties camped with no shelter but the sky and the lofty arches of the forest, and as they travelled they depended for food largely on the fish they could catch, and the deer and other creatures they could shoot.

The route oftenest used was by way of Lake Champlain, and up Otter Creek, then down White River and the Connecticut. This was commonly known as "The Indian Road," and for nearly the whole distance it was on the borders of or in Vermont.

The raids from Canada led to the establishment of Vermont's first settlement, Fort Dummer, in the southern part of what is now Brattleboro. Work was begun on the fort in February, 1724. The task was undertaken by Massachusetts, and the fort was named in honor of its lieutenant-governor. By early summer it was ready for occupancy. It was built of hewn logs laid horizontally to form a square one hundred and eighty feet on a side, and there was an outer defence consisting of a stockade of square timber twelve feet in length set upright in the ground. Habitations for the garrison were built against the walls in the inner enclosure. The fort was furnished with four pieces of light ordnance that, if the need arose, could be charged with old nails or stones. There was also a "Great Gun," used only as a signal. Its sudden thunder

rolling through leagues of forest summoned aid or announced good tidings.

The fort had a garrison of forty English and friendly Indians. Some of them would climb the neighboring mountains and spend long winter nights on the summits looking in the morning and evening for smoke from enemy campfires. Others went scouting in the wilderness that lay to the northward to discover any raiding parties that might be coming toward the frontier towns. These rangers were mainly directed by Captain Josiah Kellogg, who at the age of fourteen

The Connecticut River and Mount Ascutney

had been captured by the Indians and carried off to Canada. There he lived the life of a savage among

his captors for ten years. He acquired their skill in hunting and trapping, and learned to speak their language. After his return to civilization he was of great value as interpreter in dealing with the Indians, and until he died in 1757 was constantly employed in public service on the frontiers.

Only a few months after the fort's completion it was attacked by the Indians, and four or five of its occupants were killed or wounded. A trading house was presently established at the fort, and the Indians flocked to it with their moose-skins and other furs.

Several blockhouses were built at points farther up the river. These were of hewn logs with a projecting upper story, and loopholes through which muskets could be fired.

As soon as the English came into possession of Canada in 1759 and the invasions ceased, settlers began to drift into the southern part of Vermont and up the Connecticut Valley. In a short time Bennington had its hamlet in which the principal building was the Green Mountain Tavern, with a stuffed catamount for a sign. Brattleboro boasted the only store in the province, Westminster had a courthouse and jail, and at Vergennes on Otter Creek, where the beavers had scarcely quit building their dams, were a mill and half a dozen cabins.

Vermont's early settlers were very largely from Connecticut, and when it became a state in 1777 it assumed the name of New Connecticut, but

this was dropped for its present name a few months later.

Within a short time after the inflow of settlers had begun, New York and New Hampshire both laid claim to the whole region, and there ensued much hostility between these colonies. Both made grants of land in the disputed territory, and when surveyors under-

Summer work on a Vermont farm

took to run the lines of the New York grants across lands already granted by New Hampshire, they were compelled to desist. Sheriffs were resisted, and sometimes tied to trees and "severely chastised with twigs of the wilderness" by the settlers, who organized under Ethan Allen of Bennington and adopted the name of Green Mountain Boys.

Allen was from Connecticut, where he was born at

Litchfield in 1737. He was a stalwart, rough-mannered backwoodsman, brave, and rudely eloquent, and

Picturesque falls at Boltonville

a natural leader of men. When the New Yorkers made settlements on the western borders of the province, he and his Green Mountain Boys drove them away and burned their log-houses. These contests continued for many years.

Soon after the battle of Lexington the leading men of Vermont met at Bennington in the Catamount Tavern and "attempted to explore futurity." They were considering the possibility of capturing Fort

Ticonderoga near the southern end of Lake Champlain on the west side when word came from Connecticut that men were being recruited both there and in Massachusetts to help in such an enterprise. Then the conference promptly decided to act, and Ethan Allen was made commander of the expedition.

Agents were sent to Albany to secure provisions, guards were posted on the roads to prevent information of the patriots' plans reaching the British, and thirty men went to the lake to secure boats. The boats were to be taken to Shoreham, which was opposite the fort on the Vermont side of the water, and there the troops were to assemble.

A messenger was sent from Bennington to Rutland, sixty miles distant, to rally the Green Mountain Boys. He made the journey on foot in twenty-four hours along the wretched roads of the new country, and over rough by-paths only marked by blazed trees. He visited several hamlets and summoned their fighting men, and here and there spoke with an isolated settler, who at once left his chopping or his planting to take his gun.

Meanwhile a spy in the guise of a simple backwoodsman went to the fort and gained admission on the pretext that he wanted to get shaved. After taking note of all that could be seen in the place, he returned to his friends.

On the evening of the ninth of May, the force had come together at a little cove about two miles north of Ticonderoga, which was out of sight across the lake.

There were sixteen men from Connecticut, forty from Massachusetts, and nearly one hundred and fifty Green Mountain Boys. They waited anxiously for the boats which were to come from the southern tip of the lake. These did not arrive until nearly morning. They included scows, skiffs, dugouts, and yawls, but not enough to transport half the force. Allen and eighty others embarked and soon had crossed to the other shore. The boats returned for the rest of the men, but day was now at hand, and Allen decided to move forward without further delay. He was completely successful, and the great stronghold with all its cannon and military supplies fell into the hands of the Americans and cost them not a single life.

Two years later, Burgoyne's army made its way down from Canada and retook Ticonderoga. When he reached the southern end of the lake in midsummer the settlers of western Vermont were panic-stricken. They feared that the Indian allies of the expedition would be turned loose on them, and all the farms in the exposed district were deserted. The main highways leading southward were crowded with horsemen and footmen, and with lumbering vehicles carrying women, children, and household goods, and with straying flocks and herds. Mudholes and streams that had to be forded, added to the difficulties of the flight.

A call was sent out for the Vermont militia to assemble; General Stark brought troops from New

Hampshire, and other troops came from western Massachusetts.

Provisions were becoming scarce in Burgoyne's army, and he determined to seize for his use the stores which the Americans had collected at Bennington. To accomplish this he despatched a Hessian officer, Colonel Baum, with a force of three hundred unmounted dragoons, who were to provide themselves with horses on the foray, one hundred Indians, and four hundred other troops. Lieutenant Colonel Breyman with six hundred more men was ready to support Baum if needed.

The latter approached Bennington on August fifteenth, but encountered the Americans in such force that he halted his troops in a commanding position on a hill and had them prepare to defend themselves there.

That night rain began falling and increased to a downpour. It continued to fall heavily from a leaden sky all the next day, but in spite of the drenching rain Baum kept his men busy with axes and spades extending and strengthening their defences.

On the following morning the sun rose clear, and the raindrops glittered on forest and meadows, corn-fields, and ripening wheat, and filmy vapors rose from the pools and swollen streams. The Americans began early in the day to assault the British position from different sides, and as Stark led a charge he shouted to his men, "Those redcoats are ours to-day, or Molly Stark is a widow!"

Few of the Yankee farmers wore uniforms. Most of them fought in their shirtsleeves, for the weather was intensely hot, and they wore no badge but a corn-husk or a green twig in the hatband. So vigorous was their onset that the Indians stole away in affright, glad to escape with their own scalps and without plunder.

Bennington battlefield

For two hours the roar of conflict was, as Stark said, "like a continuous clap of thunder." The enemy had two small cannon, but presently the cannoneers were shot down, the guns taken, and the Yankees swarmed over the breastworks. Few of the British escaped death or capture.

About this time Breyman, who had been delayed

by the rain and the wretched condition of the roads, arrived. A part of the Americans had gone to the town with the prisoners, and the rest were scattered over the blood-stained field in quest of spoil. For a little while it looked as if they might be overwhelmed. The small force that at first was able to oppose the enemy gradually fell back until the militia rallied in sufficient strength to make a stand. A warmly contested engagement continued until after sunset, and then Breyman hastily retreated. Stark pursued him till it was impossible to aim a gun or distinguish friend from foe in the gathering gloom.

Breyman escaped with less than one hundred men. The American loss in killed and wounded during the day was seventy. Two of the cannon captured from the Hessians in this battle are to be seen in the State House at Montpelier.

Ethan Allen took no part in the Bennington fight. He had fallen into the hands of the British the same year that he captured Ticonderoga, while engaged in an expedition that invaded Canada. For three years he was held a prisoner, most of the time in England. Then he was brought back and exchanged. On his arrival at Bennington the people thronged into the hamlet to greet their old leader, and though powder was scarce and precious a cannon was charged, and it thundered forth a salute of thirteen guns for the United States, and one for Vermont. In his last years Allen lived at Burlington, where he died in 1789.

A Lake Champlain ferry-boat

Lake Champlain

LAKE Champlain was discovered in 1609 by the great French explorer whose name it bears. He came thither from the little settlement of Quebec, which he had started the year previous. His main object was to find a way to China. A war party of the

Canadian Indians went with him, and he had agreed to help them in attacking their enemies, the Iroquois.

They went up the Richelieu River and entered the lake about the middle of the summer in twenty-four canoes. There were two other Frenchmen besides Champlain, and sixty warriors. Some of the Indians spent a part of each day on shore hunting in order to supply the expedition with food. To be sure, they had a provision of parched maize pounded into meal, but they saved this for use when they should be so close to the enemy that hunting would be impossible. Late

Sunset near Colchester Point

in the day the party would land, draw up their canoes, and range them closely side by side. Rude, bark-covered sheds were then made, dry wood was gathered

for the fires, and trees were felled with which to form a defensive barricade on the landward side of the canoes and shelters.

Champlain went on amid the islands and broad reaches of water to the more open portion whence he could see the forested ridges of the Green Mountains far off in the east, while on the western horizon loomed the Adirondacks. At the southern end of the lake the expedition encountered a party of Iroquois, and fought them victoriously. That satisfied Champlain's allies, and the party paddled back to Canada.

The Indians' name for the Lake meant "The Gate of the Country," and this very well described it in the days when waterways were the chief thoroughfares. Canoes could go from it to the St. Lawrence, or southerly to either the Hudson or the Connecticut, with only short portages. The lake is one hundred and twenty-six miles long. It varies greatly in width. There are parts so narrow you can almost toss a stone across them, but opposite Burlington is a stretch of water fully ten miles broad.

In the early years of the nineteenth century many of the great pines that grew in Vermont's virgin forests were felled, and made into rafts that voyaged northward on the lake and down the Richelieu River to the St. Lawrence. The rafts were impelled by both sail and sweep. The crew lived on board, and when the south wind filled the sails and wafted their ponderous craft past the ever-changing shores the voyage was very

pleasant. But calms or adverse winds meant hard work with the heavy sweeps, and sometimes a storm

Looking across the lake from Burlington. In the distance are the Adirondacks

was encountered which threatened to break the raft in pieces. White-winged sloops, schooners, and square-sailed scows plied to and fro carrying to Canada cargoes of wheat and potash, and bringing back salt and merchandise from beyond the sea.

When winter converted the lake into a plain of ice it afforded a highway for traffic on runners, and many were the sled loads of produce that were taken to Montreal to exchange for goods.

There was a time when smugglers engaged in their unlawful traffic on the lake. They sailed by night in armed bands of such strength that the revenue officers seldom ventured to molest them. One notorious smuggling vessel was called the *Black Snake*. This was finally seized by a party of militia where she had crept

The Winooski Gorge

up the Winooski a few miles with a cargo of contraband goods. A lieutenant and twelve soldiers were detailed to take her to the lake. While doing so they were ambushed by the smugglers, who fired repeatedly from the willow-screened bank and killed three of them. The remainder of the militia hurried to the rescue and captured eight of the smugglers. Two more were

taken later. When these men were tried, one was sentenced to death, three to ten years' imprisonment, after first standing in the pillory, and two were to receive fifty lashes each.

The lake continued to be dotted with schooners and sloops until after 1875. Since then the railroads have taken to themselves nearly all of this traffic.

Here and there on the long narrow lake is a ferry. Most of the ferry-boats are propelled by steam, but formerly they were flat-bottomed scows that had a mast and sail. When there was no wind, the craft had to be coaxed along with oars or by poling.

The ice makes an excellent bridge all through the winter, and at that time the lake is often used as a race-course for horse trots. In the spring, when the ice begins to melt, people continue to venture on it, and they do not always stop soon enough. Teams break through, and occasionally horses are drowned.

The most important lake port is Vermont's largest city, Burlington. In the early days the goods received here by steamers and by canal boats and other craft from the Hudson and St. Lawrence valleys were sent to the towns farther east in great eight-horse wagons. But now railroads pass up the adjacent river valleys and go over the divide to the valley of the Connecticut.

Lumber is no longer sent north to the St. Lawrence, for Vermont was shorn of its choicest timber many years ago, and the immense forests of Canada have

become its chief source of supply. A vast amount of lumber reaches Lake Champlain from the Canadian waterways, and Burlington is one of the leading lumber markets of the country.

In this part of the lake occurred some lively naval fighting in the War of 1812. Once during that war the

The Winooski Valley with Camel's Hump in the distance

islet Rock Dundee near Burlington was mistaken by the British for a United States vessel and was peppered with shot.

The first steamer used on the lake was launched at Burlington in 1808, only a year after Fulton's successful experiment on the Hudson. This vessel as-

tonished the spectators by its wonderful performance as it churned its way through the waters at the rate of five miles an hour. The steamers now on the lake offer a most agreeable way of journeying up and down it and

Bow Arrow Point between North Hero and South Hero islands

getting acquainted with its scenic charms. It is noted both for its superb views and its rare historic associations, and has long been a favorite summer resort.

One of the famous old-time dwellers in the vicinity of Lake Champlain was Horace Greeley, who later became a renowned figure in the literary and political world of his day. It was in 1821, when he was not quite ten years old, that his father moved from New Hampshire to West Haven near the southern tip of the lake. The home of the Greeleys was three miles from its borders, and the lake was not in sight, but they could see the morning mists that rose from its surface, and the hills that formed its opposite shore. They were poor, and a staple article of food with them was bean porridge.

Horace had a passion for books, and in the evening he spent much of his time reading by the light of the pine-knots blazing on the hearth. Candles were a luxury too expensive to be indulged in. The neighbors attributed his continual reading to laziness, and prophesied that he would not prosper.

But he was never idle, and he found various ways to earn money. He gathered nuts and sold them. He would hack away hours at a time at a pitch-pine stump, tie up the pieces in bundles, and carry them to the store, where they could be sold for kindling wood. He went bee-hunting and got honey to sell. In one way or another he always contrived to have a little money, and he spent most of it for books.

When he was fifteen he went to East Poultney, about a dozen miles away, and became an apprentice of the publisher of a country newspaper and began to set type. He was an extremely gawky-looking youth, tall and slender, with very light tow hair. At first the other apprentices threw type at him, made saucy remarks to him, and on the third day took one of the large balls that were used to ink the type and made four dabs on his hair. But he went on with his work as if nothing had happened. After that the boys abandoned their pranks, and he and they soon became good friends. He worked at his type-setting barefooted, and with his shirtsleeves tucked up above his elbows.

There was a lyceum in the place which had won such a fame as to often attract to its meetings people from

a distance of ten miles. It assembled weekly at the little brick schoolhouse. The great feature of the evening was a debate on subjects like: "Is novel-reading injurious to society? Is marriage conducive to happiness? Is the Union likely to be perpetuated? Was Napoleon Bonaparte a great man?"

Horace Greeley, the journalist

Horace was a leading member of the lyceum during the four years he lived in the town, and as a debater was unexcelled in the range and accuracy of his knowledge and in the clear and lively presentation of his arguments.

Fairfield, a few miles east of Lake Champlain near St. Albans, was the birthplace of Chester A. Arthur. He graduated from college at the age of eighteen, and three years later, in 1851, became the principal of the academy at North Pownal in the southwestern corner of the state. It is an odd fact that James A. Garfield, whom Arthur succeeded as President of the United States, taught a writing school in the same building not long afterward. He had become a student at Williams College in the fall of 1854, and at the end of the first term earned money by teaching writing in the two months' winter vacation.

An earthenware dasher churn of long ago

Vermont Industries

THE most important industry of the "Green Mountain State" is agriculture. Many of the largest and best farms are on the broad lowlands which border Lake Champlain from Canada to the Hudson Valley. Abundant crops of hay and grain are raised, and apples

and other fruits are largely grown. The situation is particularly favorable for fruit because the prevailing westerly winds from over the lake tend to prevent early frosts.

Formerly many sheep were kept and much wool was sold from the farms. The flocks have decreased four-fifths, but the Merino sheep kept at present produce a fleece that weighs three times as much as that which was sheared from the old-time sheep.

In a farm-yard corner

The cattle, too, have been greatly improved. Cows have been imported from parts of Europe where they have long been carefully bred, and the improvement has been continued here so as to secure animals that will turn their food into the largest possible amount of rich milk. In no other state is so high an average yield of butter secured from the cows as in Vermont. They can be pastured to advantage on the rougher farm land, while hay, corn, and other crops can be raised on the better land.

Much of the butter is made at creameries. One of the greatest of New England creameries is at St. Albans. There are times when it makes more than ten tons of butter in a day. The milk for the butter is gathered from six hundred dairies and carried to various centrally located separators. At these the milk is poured into the separating machine which whirls it very rapidly. The watery part is heavier than the cream, and crowds to the outside and is drawn off through a tube while the cream passes off in another tube. This process does not deprive the milk of all its food value, and the creamless milk is taken home by the farmers for their pigs and calves.

The cream is sent to St. Albans, where it is put into a big churn, and by means of machinery is shaken and beaten till the particles of fat are parted from the buttermilk. Next the butter is transferred to a machine which washes it, then presses out most of the water and mixes it evenly with salt to flavor it. After that it is molded into prints or packed in wooden tubs.

The butter of the state was in good repute even in the primitive days of the earthen milk-pan and slow laborious dasher churn, and when a summer store of ice was a luxury a farmer never dreamed of possessing. Then the good, bad, and indifferent butter of a whole township went as barter to the village store, where, with little assorting, it was packed in firkins. Later it was sent to the city markets on wagons or boats in the summer, and on sleighs in the winter, along with

cheese, pork, apples, maple sugar, and other products of farm and forest.

Perhaps no manufactured butter or cheese quite equals the home-made at its best, but the average quality of the latter is low, and the price it will bring is similarly low. The person who buys creamery butter or factory cheese in a store is reasonably certain that it has been made by improved processes and machinery under expert care, and that it has high excellence. There are about two hundred creameries and seventy cheese factories in the state, and upright dasher churns and wooden cheese presses are no longer common on the farms.

One product in which Vermont is preëminent is maple sugar. It produces more than half of what is made in the United States. The source of the sugar is the sap of the rock maple trees. In the spring, as soon as there is a thaw to set the sap moving in the trees, the gathering begins. The season usually lasts from early March through April. One, two, or three holes are bored near the base of each rock maple that is of sufficient size in the tract of woodland which is to be covered in the operations, and small metal spouts are driven into them. The sap starts to flow almost instantly if the weather is mild. A pail is hung on each spout to catch the sweet dripping liquid, and the pail has a cover to keep out rain-water and dirt. It is large enough to contain all of one day's flow.

One or two men with a span of horses hitched to a

sled, on which is a barrel or a tank, go about among the trees to gather the sap and draw it to the sugar-house. There it is boiled in a big pan set over a fire on arches of brick or stone. When the sap has been over the fire until the water in it has nearly all passed away in steam,

A sugar-house on the borders of a grove of rock maples

it is strained and then rapidly boiled until it becomes sugar. This final process, however, is often omitted, and much of the maple sweet is sold in the form of syrup instead of sugar.

At the beginning of the sugar season the snow is still deep in the woods, and walking is difficult unless there is a stiff crust. The larger sugar places have two

or three thousand trees on them. If there are only a few hundred trees, the sap gathering may be done by a man who goes about on snowshoes with a yoke on his shoulders, from either end of which is suspended a large pail. The sap will not flow freely unless the nights are frosty and the days warm. In such weather the supply of sap is sometimes so copious that the men have to work day and night to prevent loss.

Years ago the sap spouts were made of wood. Often they were of elder or sumach, which have a pithy

Gathering sap

heart that can be pushed out. The sap was caught in troughs roughly hewn out of blocks of wood, or in

dishes made of birch bark. Later clumsy wooden buckets that were larger at the bottom than at the top were used. The gathering was done with oxen. When the sap was taken to the sugar camp, it was boiled in the open air in enormous kettles hung over a fire built on the ground. The fire was opposite an open-fronted shanty that sheltered the sugar makers from the weather during their daily and nightly labor.

The sugaring-off in the old cauldron was greatly enjoyed by the children. With a spoon or a wooden paddle they would dip up some of the thick warm syrup and spread it to cool on the nearest clean snow. Its gummy sweetness, when it was eaten, was more delightful than any candy they could buy in the shops.

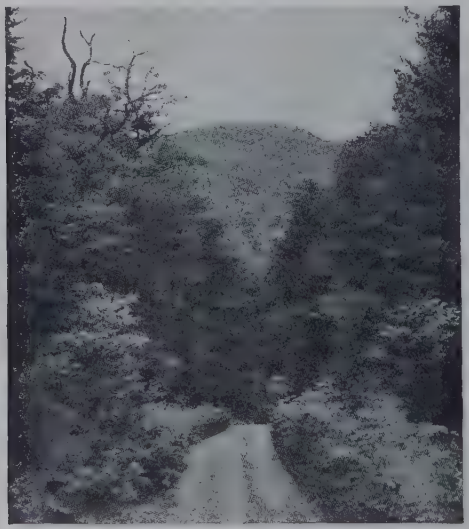
Many old-time families saw no sweetening from one end of the year to the other but maple sugar and syrup, and the honey from their few hives, or the uncertain spoil of the bee hunter.

Little remains in Vermont of the fine forests of the pioneer period. Yet in the northeastern countries lumbering is a leading occupation even now. There is considerable timber also in the rugged ranges of the Green Mountains, which extend the entire length of the state. The loftiest height in Vermont is Mount Mansfield, about twenty miles northwest of Montpelier. It has an altitude of 4364 feet.

In St. Johnsbury is a great twelve-acre factory devoted to the making of scales. It is the largest factory in its line in the world. Over one hundred varieties

of scales are made. The smallest will weigh a letter, and the largest will weigh a loaded railroad car. These Vermont scales are the standard in many countries.

Another widely known manufacture of the Green Mountain State is that of organs for homes and for churches and other public buildings, at Brattleboro. In the vicinity of this town the famous English author, Rudyard Kipling, abode for a time, and there wrote



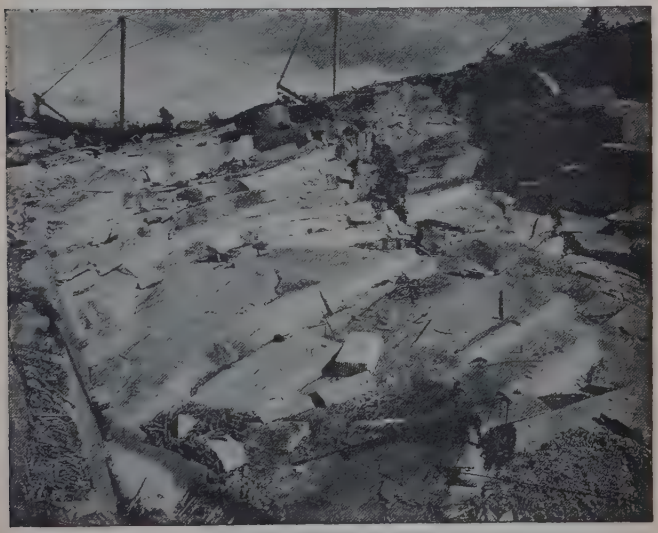
Mount Mansfield from Smuggler's Cove

"Captains Courageous," a story of the Gloucester fishermen which ranks among the best of boys' books.

One noteworthy source of wealth in Vermont is its quarries. Limestone is gotten out for building pur-

poses and also to be burned for lime. Granite of different colors and textures is quarried at various places, and in and about Barre this industry employs many thousands of workers.

Some of the most important of American slate quarries are in Vermont. Slate is a stone that can easily

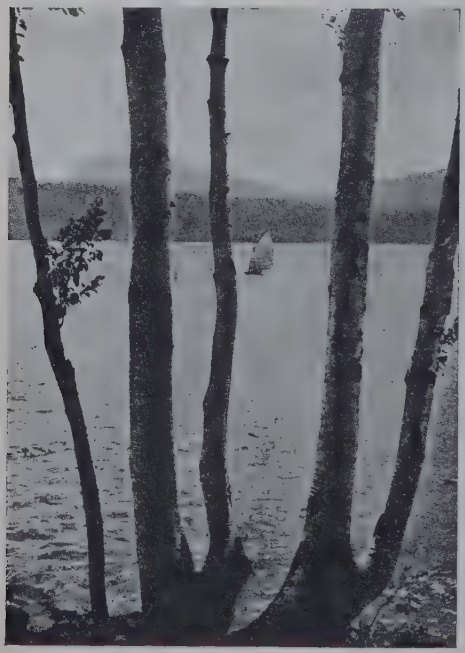


A Barre granite quarry

be split into thin layers with smooth surfaces. It is largely used for roofing, and the pieces after splitting need scarcely any preparation except trimming to make them ready for laying. The stone is so compact and hard that it resists the weather very effectively. Slate

for school blackboards is polished by rubbing it with sand, pumice stone, and water.

Marble began to be quarried in the state soon after the Revolution, and over half the marble used in the country since that time has come from Vermont. It is a comparatively soft and fragile stone and has to be handled with a good deal of care. The marble is used for building purposes and for statues and monuments. The Greeks used marble for some of their most famous buildings and statues.



Lake Willoughby

The great quarries of West Rutland were first worked in 1836. Before that the site of the quarries had been a barren sheep pasture, shaggy with stunted evergreens. The wealth this pasture roofed was undreamed of, and

the whole tract was so cheaply valued that it was once exchanged for an old horse worth less than a single one

The depths of a Rutland marble quarry

of the huge blocks of marble that day after day are hoisted from the quarry depths. In the early years the growth of the business was slow, for there were no railroads in the region, and all the marble had to be drawn by teams twenty-five miles to Whitehall on Lake Champlain, the nearest shipping point.

Besides, there was doubt as to the durability of the stone. But now long exposure to our variable and destructive weather has proved it to excel any foreign

marble in this quality. Since 1852, when a line of railroad that passed near was completed, the marble business of Rutland has increased rapidly. The quarries are on level ground, and the excavation has gone to a depth of over one hundred feet. Machines on movable railways cut grooves and drill series of holes in the marble floor, and mark off the stone into blocks. These blocks are separated from the rest of the mass by the use of iron wedges, for blasting would injure the stone.

Most of the marble is taken out in oblong blocks that have a length of ten or fifteen feet, and a width and thickness of from three to five feet. To cut the rough blocks into such shapes and sizes as buyers desire, before sending the marble away, saws are used which consist simply of long smooth strips of steel. Very hard sand borne by a little stream of water is continually supplied under the machine-moved saws as they sway backward and forward. The sand rubs against the marble and does the cutting at the rate of about two and a half inches an hour. Sand and water are also used for polishing.

Marble is usually nearly white, but differs a good deal in delicate shades and markings. In the northwestern part of the state beautiful variegated and black marbles are quarried. They are much harder than the Rutland marble, and it costs more to shape and polish them.

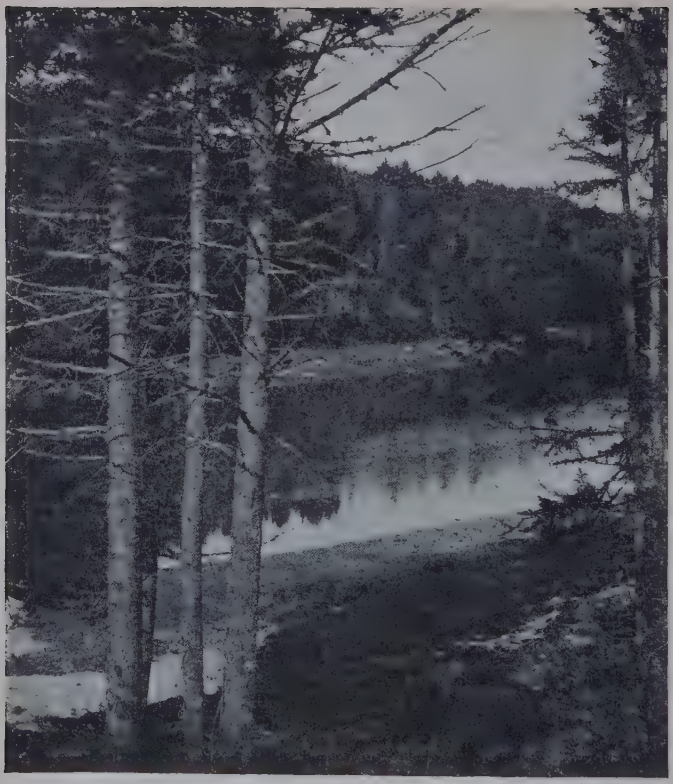
There is very little level land in Vermont, and among

the towns of the state are scarcely any which do not contain some mountain or lofty hill from which a delightful view can be obtained. The mountains are nearly all clothed with verdure from base to summit,

Newbury beside the Connecticut

and the name of the state, derived from two French words, Verd Mont, which mean Green Mountain, is very appropriate.

The state abounds in lakes, ponds, and little rivers, and is one of the most attractive of the nation's summer playgrounds.



The Sheepscot River, a little east of the Kennebec

Historic Maine

AN early English visitor to the Maine coast was Captain Weymouth, who landed about the first of June, 1605, halfway between the Penobscot and Kennebec rivers, and explored the neighboring streams, harbors, and islands. The Indians brought many

furs to the English ship to exchange for trinkets. One day they took several of the crew who were on shore to where other Indians sat around some fires laughing and talking, while puffs of smoke rose from their mouths. Probably the sailors had never seen any one smoking before. Deerskins were spread for the white men to sit on, and a pipe, the bowl of which was made of a lobster's claw, was passed to them. They sucked the smoke into their mouths as they saw the natives doing, and called the operation "drinking tobacco."

When Captain Weymouth was nearly ready to sail away he had three Indians, who came to the vessel, seized and thrust below deck. Several sailors rowed ashore and caught two more savages. It was as much as they could do to grip the nearly naked Indians and get them into the boat. They had to drag them on board by their topknots. The captives were taken as slaves to England, but Captain Weymouth felt that he was conferring a benefit on them because they would be taught his language and religion.

Two years later, toward the end of August, an English colony arrived from their homeland in two vessels, and started a colony on the peninsula west of the Kennebec where the river joins the sea. The ships returned to England, and the settlers busied themselves building houses and a little vessel. By the time winter set in with its sleet and snow, they had finished a fort, a storehouse, one large dwelling, and a number of small

ones. But the storehouse burned with all their provisions and the furs they had bought from the Indians. They were obliged to live on fish and such game as they could shoot, and on dog meat. Their cabins could not keep out the searching winds and biting frost. Many of them were sick, and their leader, George Popham, died. In the spring a ship came with supplies, but the settlers declared it was of no use for Englishmen to try to live in such a cold country, and they all either returned to England, or went in the little vessel they had built to Jamestown, Virginia.

The Southern Cross on the Maine coast

For some time afterward only fishermen pitched their tents or built their huts along the rocky Maine coast.

In 1614 the famous Captain John Smith with two ships and forty-five men visited the region. He and his fellows built seven boats in the vicinity of the Kennebec, and used them in part for fishing, and in part for exploring with the hope of discovering gold and copper mines. No mines were found, but Smith

was presently able to sail to England in one of his ships with a valuable cargo of fish and furs. The master of the other ship tarried behind and prowled along the coast as far as Cape Cod, capturing natives at several places. Finally, he crossed the ocean with twenty-seven of them whom he sold as slaves in Spain.

Maine's first permanent settlement was made in 1624 by emigrants from Plymouth Colony at what is now York, but which they gave the local Indian name of Agamenticus.

A few years later Sir Ferdinando Gorges was made proprietary lord of the country between the Piscataqua and Kennebec rivers, and as far north as Lake Umbagog. The region was given the name of Maine in honor of the English queen, who came from France, where her estate was the province of Mayne.

The settlements were increasing in number, and Gorges, who directed the affairs of the colony from his English home, foresaw a rich reward. He selected the plantation of Agamenticus for his capital, and presently made it a city, naming it for himself, Gorgeana. It comprised twenty-one square miles. The city had a mayor, aldermen, and councilmen, and there were policemen, each of whom carried a white rod. Yet Gorgeana never had as many as three hundred inhabitants, and at the end of ten years became the town of York.

In 1652 Massachusetts laid claim to Maine as far as Casco Bay, and administered this region as a county

with the name of Yorkshire. The heirs of Sir Ferdinando Gorges continued to have a claim on the country, but after it had been devastated by King Philip's War they sold all their rights to Massachusetts. From the time of the Revolution until 1820 Massachusetts governed the territory under the name of the District of Maine. Then it became a separate state.

One of its notable men in the colonial period was William Phipps. He was born at Woolwich near the mouth of the Sheepscot River a few miles east of the Kennebec, in 1650. His parents had twenty-six children, twenty-one of whom were boys. When he was about sixteen years of age his father died, leaving little else than a small farm for the support of his numerous family. William was presently apprenticed to a ship's carpenter for four years. As soon as his term of service expired he went to Boston and worked at his trade and learned to read and write. A year or two later he married and returned to his old home on the Sheepscot River, where he made a business of building vessels.

After a time he heard that a Spanish ship laden with treasure had sunk near the Bahama Islands. Shortly afterward he made a voyage to England and interested the Duke of Albemarle in the treasure ship. The duke furnished a vessel, and Phipps sailed to the Bahamas. He encountered serious difficulties, but in the end found the wreck lying in forty or fifty feet of

water. From it he obtained thirty-four tons of silver, besides gold, pearls, and jewels, worth in all $1,350,000. His share of this amounted to seventy thousand dollars. For the fair manner in which he treated the crew, and the honest division he made of the spoil, the king knighted him, and the Duke and Duchess of Albemarle sent his wife a gold cup worth four thousand dollars as a mark of their esteem. He was appointed high sheriff of New England, and later governor of the colony of Massachusetts.

By 1675 Maine had thirteen settlements, and these contained five or six thousand inhabitants. Their

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Block house at Fort Kent, a relic of the days of Indian warfare

vessels bore away ample freights of lumber from the mills, furs from the trading houses on the rivers, and

fish from the sea. The fields yielded abundantly, and thriving herds of cattle were in the woody pastures.

Then came the Indian wars, and for nearly a century the settlers were in constant terror of savage raiders. The trouble began in the summer of 1676 when King Philip and his warriors were being hunted down. Many of the Indians from the defeated tribes fled and mingled with the red men of Maine. One of these refugees, known as "Simon, the Yankee-killer," visited the home of Anthony Brackett at Back Cove in what is now Portland. On the ninth of August the Indians killed a cow of Mr. Brackett's, and he complained to Simon.

"I can bring to you the fellows who killed the animal," Simon declared.

He went off and two days later returned with a party of savages. "These are the Indians who killed your cow," he said to Mr. Brackett.

Then they seized and bound the entire family, consisting of Mr. and Mrs. Brackett, their five children, and a negro man-servant. Afterward they went to neighboring homes, killed or captured thirty-four persons, and set the buildings on fire. The Brackett family continued in captivity until November, at which time their captors came, in their wanderings, to the north side of Casco Bay. Mrs. Brackett found an old birch canoe on the beach. She repaired it, and the family and the negro man secretly got into it and paddled across the bay to Black Point. A vessel

bound for the Piscataqua chanced to be there, and on it they made good their escape.

The Indians engaged in forays all along the coast. They even had an ambitious scheme to capture the white men's fishing vessels and sail down the coast in them to burn Boston. In July, 1676, they resorted to the islands that the fishermen frequented in Casco Bay, and prowled along the shores spying out their prey. One dark night they noiselessly embarked in their light canoes, boarded the motionless vessels lying at anchor, and killed or captured their sleeping crews. Thus they secured about twenty vessels, each of which had had a crew of from three to six men.

When news of this reached Boston, a large ship was sent to the scene, well supplied with cannon and small arms, and manned by forty sailors and soldiers. It was expected that the ship would encounter the captured fleet in the hands of the Indians, and that there would be a battle. But she found the vessels, one here, one there, some aground and some beating against the rocks. They were too large to be propelled with paddles, and the Indians could not navigate them. The sails had veered and flapped about, and the vessels had gone in every direction except the one the dusky mariners wanted to go. So the Indians soon abandoned their prizes in fright and disgust.

During King Philip's War more than half of the Maine settlements were laid waste, and nearly three hundred

of the inhabitants were killed, or carried into captivity from which they never returned.

Of all the combats in Maine between the whites and Indians the best known is "Lovewell's Fight." This has been celebrated both in prose and in ballads. In the middle of April, 1725, Captain Lovewell with forty-six volunteers started from Dunstable, Massachusetts, to hunt Indians about the headwaters of the Saco. They did this partly because the Indians were a menace to the settlements, and partly in hope of profit, for a liberal bounty had been promised for every Indian scalp.

One of the party returned on account of lameness. Later, another was disabled by reason of an old wound, and he, with a kinsman to help him, went back to the settlements.

By the time the force reached Ossipee Pond in New Hampshire the serious illness of one of their number caused them all to halt, and they built there a small stockade fort. There they left the sick man with a surgeon and eight of the most weary of the party. The rest continued their march toward what is now known as Lovewell's Pond in Fryeburg, Maine, twenty-two miles distant. On the night of Friday, May seventh, they encamped by a brook that enters the pond at the northwest corner. Only two miles farther on was Pigwacket, the principal village of the Indians of that region.

The next morning, while the adventurers were at

prayers, the report of a gun was heard. They went along north of the pond in the direction whence the sound came, and had arrived on a level plain when they saw an Indian standing on a point that thrust out into the pond on the east side. The men left their packs among the ferns and moved cautiously forward.

Indian Island above Oldtown. This is the dwelling-place of a remnant of the once powerful Penobscot tribe

In a short time they met the Indian returning toward the village, and fired and killed him.

Meanwhile, a party of Indians led by Paugus, the chief of the tribe, found the packs which had been left on the plain. They counted them and found that their own force was three times as strong as that of the English. It was now about ten o'clock. Lovewell and his men started to go back the way they had

come. They had passed over a stream, since known as Battle Brook, and were crossing the plain when the savages came rushing toward them from front and rear yelling like demons. The English responded with determined shouts, and fired a volley that made the Indians withdraw somewhat.

But the savages soon pressed near again, and some of the combatants were not more than twice the length of their guns apart when they fired. Captain Lovewell was mortally wounded, but he leaned against a tree and kept on shooting even after he was too far gone to speak. When eight had been slain besides the captain, the party fell back to the pond. On their right was Battle Brook, on the left a rocky point, and in front they were partially protected by a deep bog and a belt of tall pines. There the Indians beset them for the rest of the day.

Some of the guns became foul with so much firing, and John Chamberlain went down to the brook to wash his out. While he was doing this he observed a huge Indian not far away engaged in the same task, and the Indian saw him. Both finished the washing in all haste and began loading at the same instant.

"Me kill you now!" the Indian shouted.

"Maybe not," Chamberlain responded.

They fired, and Chamberlain's bullet crashed through his foe's brain. The Indian's bullet whistled harmlessly up in the air.

Just before dark the savages retired, and about

midnight the moon rose. Then the English began a retreat. Two of the mortally wounded had to be left. Only nine were uninjured, and they were without food, for their packs had been captured. One man, exhausted by fatigue and loss of blood from three wounds, had crawled slowly and painfully to the edge of the pond, and there found a birch canoe. He managed to enter it and push it off from the shore. Then he lay down in it, and the wind wafted the craft to the western side of the pond. After a while he recovered his strength a little, and he finally reached the Ossipee fort.

The rest of the party had travelled no more than a mile or two when four of them stopped, unable to keep longer on their feet. At their request the others went on. They themselves presently resumed the journey, and continued for several days, alternately resting and walking a little way. But they grew weaker and weaker, and first one and then a second sank to rise no more. One of the remaining two reached the Ossipee fort, and the fourth man made his way along the side of the Saco River down to Biddeford, where he arrived emaciated by hunger almost to a skeleton.

It was Wednesday when the remnant of Lovewell's band got to Ossipee Pond, so slowly did they travel, and so indirect was their route. They found the fort deserted. One of the company had run away at the beginning of the fight, and reported to the men at the fort that Captain Lovewell had met with disaster. They

did not doubt that all his force had been killed or captured, and that the savages would fall on the fort next.

The headwaters of the Saco

So they considered it prudent to start for the settlements.

Luckily they left some bread and pork, and these saved the fugitives from starvation. The only food of the little band during their retreat had been a few roots and the bark of trees. After a short rest they went on, and at last reached home, where they were received with great joy, as if they had been restored from the dead.

In the heart of the Maine woods

The Maine Forests

ALL the eastern portion of the United States was formerly heavily timbered, but now most of the trees have been cleared away to make room for the cultivation of crops and for pasturing domestic animals. The forests that remain are chiefly in regions

where the land is not desirable for farms, or in districts far away from settled communities. But in northern New England extensive forests still exist. Nearly all of Maine from the White Mountains eastward is woodland, and in it both Connecticut and Rhode Island might be placed and lost to the world and to each other. If you climb Mount Katahdin, the state's loftiest mountain, which rises to a height of 5273 feet,

Mount Katahdin from the West Branch of the Penobscot

you can see from its summit only trees as far as the eye can reach. Katahdin is almost in the exact centre of the state.

The forest once contained many tall pines that thrust up above the other trees and gave to Maine the title of "The Pine Tree State." But these big pines have

nearly all been cut now, and the most numerous of the valuable forest trees that remain are spruce. An immense amount of timber comes from Maine's wilderness every year.

Formerly logging did not begin until early in the winter when the boggy places in the rude forest roads had been frozen and the snow had smoothed over their unevenness. Now cutting starts in late summer that the logs may be ready to be moved when the snow comes. Somewhat before a lumber crew begins work an advance guard goes to the forest where their employers' claim is located. They select a spot near one of the lakes or small streams that are so numerous in the swampy northern woodland, and establish a camp to serve them and their comrades during the long cold winter. A hut is built of logs. The ends of the logs are notched so they will fit firmly together, and the chinks between them are stopped with moss and clay. A stone fireplace is constructed at one end. The roof is made of long split shingles covered with spruce boughs, which, after the first fall

A lumberman's camp

of snow, keep out the wind and frost very effectively. Under the roof is a loft with the men's bunks ranged along the walls.

In the early days the huts had only the hard-trodden earth for floors, but now every camp is fitted up with a certain rude comfort. There are plank floors, long tables and benches, and a considerable assortment of dishes. Plenty of good food that is varied enough not to get tiresome is provided. Bread, doughnuts, beef, pork, codfish, potatoes, beans, and molasses are the staples. Sometimes a lucky shot may secure bear or moose meat to feast on for a few days.

The beans are cooked to perfection in a bean hole — an excavation three or four feet deep just outside of the log dwelling. Late in the day a fire is built in the hole, and when the wood is reduced to a great heap of coals the bean pot, with the beans and some tins of brown bread inside, is placed in the hole and covered with coals. Ashes and earth are then heaped on, and the pot is left there through the night. It is exhumed in the early morning, and the beans and brown bread are eaten for breakfast. The woodsmen all agree that beanhole beans are far superior to the oven product.

Near the cabin dwelling of the choppers another is built with much care to make it snug for the horses. Tote teams usually have brought supplies into the woods at the end of the previous winter while the roads were still frozen and snowy.

A boss is in charge of the crew, and he sees that the

choppers, teamsters, and cook do their work properly. He decides where to begin felling the trees, and then all hands clear a road from that spot to the lake or stream. Over this road the logs are drawn later. They are left either on the ice of the lake or at landings beside the stream. The men are busy plying their axes and saws from dawn until sunset, except for a short pause at noon for dinner. Often the evenings are enlivened by songs and games.

There is more or less danger in swinging the axes and felling the trees and handling the logs, and occasionally a man is wounded or even killed. A broken limb, or a deep axe cut, or sickness is a serious matter in the lonely woodland far from any village or town.

When the spring sun melts the ice and snow, the piles of logs on the frozen lakes are set afloat, and those on the banks of the streams are rolled down into the flooded waterways. The arduous and exciting work of the river-driver now begins. He scorns danger and discomfort, and the different crews vie with each other in deeds of skill and daring. The men carry a long pole or a cant-hook, and their shoe soles are set thick with sharp iron points so they can leap about on the smooth logs without slipping. They urge the logs onward where the current is slow, and try to avoid their forming jams in channels which are narrow or rocky.

Often the chance lodging of one or two logs will obstruct the passage, and others pressing on behind

will pile up one above the other in the greatest confusion. To break one of these jams is a difficult and perhaps perilous task. There are times when this has to be done by cutting through a single log which holds back all the rest. The instant it is severed the whole mighty mass is let loose, and only by the greatest alertness and good judgment can the chopper escape.

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Kennebago Falls

If the jam forms between high rocky shores, a man may be let down by a rope from a cliff to set the logs moving again.

The lumber companies improve the streams by clearing away obstructions that are likely to cause trouble,

and they build dams at the outlets of the lakes to retain the water until it is needed to float the logs.

When the logs reach their destination they are stopped by a boom that stretches across the river, and they are gradually conducted thence to the neighboring sawmills, which, with their teeth of steel, transform them into beams, boards, and lath. In the big modern mills there is no waste. The sawdust is burned in the engine boilers, and portions of the logs that will not make good lumber can be sold for making paper-pulp, or for firewood.

Spruce is the wood most used for paper, though a number of other trees also furnish good fibre. Crooked and seamy logs and small trees and sawmill fragments that formerly had no value are excellent for pulp. After the logs have been cut into suitable lengths, a machine with rotating blades gnaws off the bark. Then the knots are bored out. For coarse grades of paper the wood is ground into fibre by being pressed against a grindstone. For better paper it is slashed into chips, and the chips are converted into pulp by a chemical process.

Some of the pulp companies have bought great tracts of forest, where by wise and careful cutting the spruce may grow as fast as used. A large portion of the material that goes into wrapping-paper, newspapers, books, and cheap grades of writing-paper is made from wood-pulp. The first wood-pulp mill began operations in 1870.

Of all the forest trees none was put to more uses by the Indians and pioneer settlers than the paper birch.

A canoe in the wilderness

The woodsman with his axe could obtain from it tent, boat, buckets, cups, plates, table-cloths, paper to write on, torches, and kindlings and other fuel. A piece of bark a yard square could be made into a vessel for catching maple sap by folding it into a straight-sided pan and bending the corners around and fastening them in place with a wooden pin.

A forest visitor about the year 1880 tells how his guide made a birch-bark canoe. It had just been completed when he arrived. The guide had spent two days ranging the mountains looking for a suitable tree, and a week more transforming the bark into a boat. The

canoe was twelve feet long. Three trees besides the birch contributed to its making. The white cedar furnished ribs and lining, the spruce fibrous roots to sew its joints and bind its frame, and from the pine was obtained pitch to stop its seams and cracks.

The forest visitor records that one day while tramping they were overtaken by a shower, and the guide quickly stripped large sheets of bark from a near tree to serve for umbrellas. When they moved on after the shower, the visitor wrapped his bark about him like an apron to shield his clothes from the wet bushes.

There are many mills along the little streams that come from the wooded uplands in various parts of the state. These mills convert both hard and soft wood into such articles as furniture, sleds, tool handles, toys, clothespins, and toothpicks. Much fine white birch wood grows in some sections, and thousands of cords of it are used yearly for spools. It is first sawed into square strips and left in piles to dry. Later the strips are fed into automatic machines which quickly turn them into spools of the required size.

One important use of the forests is to prevent the rapid running off of water. The roots and spongy leaf mould and the shade all help to hold the moisture. Where the forest has been carelessly destroyed by lumbermen or laid waste by fire, the water from storms and melting snow quickly escapes to the streams, and sudden floods are a result, while in dry times the water in the streams is very low. This entails danger to

crops and dwellings along the banks of the streams, and uncertain water-power for the mills. Thus it is essential to conserve the forests at the headwaters of our rivers, and the government is buying large areas of such woodland, in part for this purpose, and in part to ensure a future supply of lumber.

In the hardwood forests, which are leafless in winter, spring is the time for fires, for after the snow is

A forest fire

gone the sun shines through the bare branches and makes last year's leaves as dry as tinder. A lighted match or cigar stub heedlessly dropped is all that is needed to start a fire that may do enormous damage. The fire spreads very rapidly if a high wind is blowing, and the men who attempt to put it out often have a difficult task. They may have to fight it day and night for a week or more.

The ground in the evergreen woodlands continues moist all through the spring, and they suffer most from fires in a summer drought. There may be many fires burning at the same time, and the air will be hazy with smoke over great stretches of country. Something like a hundred years is required for large forest trees to grow, and when a fire makes a clean sweep killing all the trees in its path, the loss is a very serious one.

Perhaps the greatest of Maine's forest fires occurred in 1762. There was a long drought in the spring, and the tree foliage in June was shrivelled and blighted for lack of moisture. The next month a fire started in the New Hampshire woods and swept eastward across York and Cumberland counties to the sea. Not until copious rains fell late in August were the flames checked in their devastating course.

Maine contains more than eighteen hundred lakes and ponds. All these, together with the rivers, have a surface amounting to fully one-tenth of the land area of the state. Most of the lakes and ponds have wooded surroundings. The largest lake is Moosehead. It is forty miles long and from four to twelve broad. From its borders Mount Kineo rises eight hundred feet above the lake level. The mountain faces the water in so perpendicular a precipice that a person could jump into the lake from its top. This is the largest mass of hornstone known in the world, and the New England Indians got from it much of the flint they used for their arrow-heads.

The solitudes around Moosehead are frequented by big game, the streams are full of fish, and the lakes abound with water-fowl. Here and there a few faint trails wind through the forest, most of them of little

Moosehead Lake from Kineo

use except in winter; and the rivers and lakes are the chief thoroughfares, just as they were in the days of the first explorers. Even the Indians are not altogether lacking, for a remnant of the once powerful Penobscot tribe has survived, and some of its members continue to resort to the woods to hunt and fish and act as guides.

The four hundred persons who constitute this Indian tribe have permanent dwellings on the outskirts of the wilderness at Oldtown, where they occupy an

island in the river. A lumberman's bateau rowed by a swarthy Indian gives access to the island. Among the dwellings, which are set helter-skelter in a somewhat close group at one end of the island, are a public hall, a school-house, and a good-sized church. There are no streets nor roads — only paths.

Squaw Mountain

The tribe owns considerable land which the state looks after, and from which there is an annual income of about twenty dollars for each individual. Occasionally a young islander goes to college, and some of them have won fame playing ball in the national leagues.

The levels of many of the wilderness lakes vary only a few feet, and boatmen, by short portages, or by none at all, pass easily from one to another. There

are mail-carriers on some of the forest streams. One such mail-carrier paddles his canoe twenty miles from Moosehead Lake to Lake Chesuncook, where there are two tiny settlements. The journey takes him all day, and he returns the next day. At each of the Chesuncook settlements is a school-house, and the teachers come in canoes from the world outside.

Hunters, fishermen, and other pleasure-seekers often make long trips on the streams and lakes for days and weeks at a time. A guide and two persons can travel comfortably in a canoe and carry a tent, food, and the necessary camp utensils. These trips are not without a spice of danger, for there are rocky rapids to run, and wide lakes to cross where the waves sometimes threaten to engulf the frail canoe.

A deer on the forest borders

Many deer and moose and a few caribou inhabit the wild lands. These animals are protected by law most of the year, but, during the open season in the fall when shooting is allowed, thousands of sportsmen flock from

the cities near and far to stay a few days or perhaps a few weeks at camps beside remote lakes and streams. They come partly to enjoy the crisp air and the beauty of the woodlands and the rough and ready life of the wilderness, but chiefly for the excitement of hunting big game.

Scarcely less well known than Moosehead Lake are the Rangeley Lakes, nestling among forested hills in

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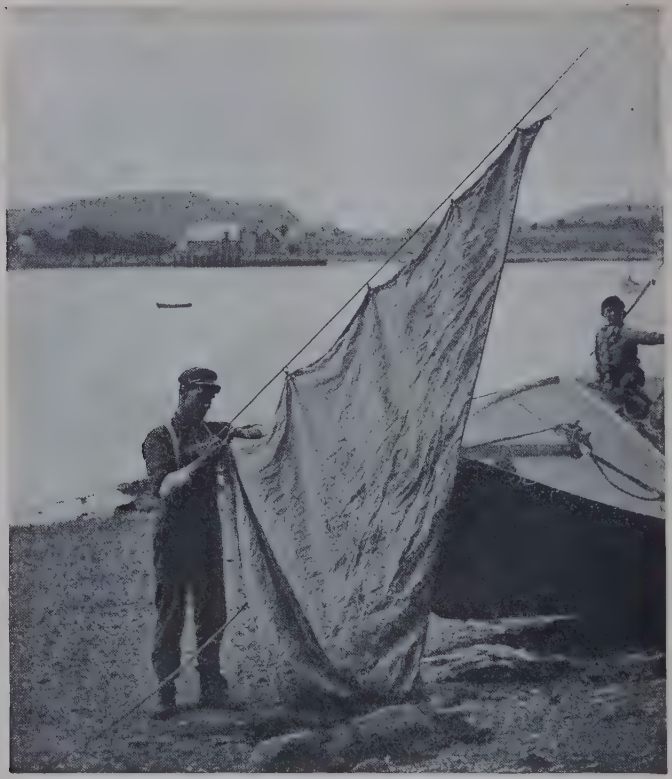
One of the Rangeley Lakes

the northwest corner of the state. They are called a fisherman's paradise. There are five of them, all connected by navigable waterways, and small steamers ply on them and call at the various camps.



Mending a sail, Mount Desert

The Coast with a Hundred Harbors

AFTER the English became masters of Canada, and French and Indian raiders from the north were no longer to be feared, the tide of immigration from the older settlements of New England set strongly eastward. In the summers of 1760 and 1761 hundreds of

men were hastening to Maine in every kind of craft that would float. The new free lands were an irresistible bait, the forests promised inexhaustible supplies of timber, the swift streams gave power for grist and sawmills, and the waters teemed with fish. As a rule only the men went the first season, and after choosing sites for their habitations and making clearings they sailed for their old homes. But the next spring they returned with their families. Usually two or three families made the voyage together and lived in the vessel until the log houses were built. It was this hardy race of settlers that founded all the shore towns east of Penobscot Bay.

This entire coast and that in the other direction as far as Portland is a labyrinth of headlands, bays, and isles. The shore-line is so jagged it resembles the teeth of a saw, and there are so many sheltered bays and inlets that Maine is sometimes called "The State of One Hundred Harbors." However, from Casco Bay south the coast is indented comparatively little, and the sandy beaches of Old Orchard, York, and other towns along the shore are well-known summer resorts. The irregularity of Maine's coast-line as a whole is such that it is nearly twenty-five hundred miles long.

Many lighthouses are needed to warn ships away from the reefs and rocky islands. All the New England coast is dotted with them, some tall, some short, some on craggy islets, some on outjutting cliffs or high

banks, some rising out of the sea. For the effective service of the lighthouses we are greatly indebted to a native of France named Fresnel. As a boy he disliked learning from books, and when he was eight years old he did not know his letters. But he was very fond of making experiments, and this induced his parents to send him from the small town where they lived to a special school in Paris. There he worked very earnestly and at length became an engineer, and invented a way to cause the light in a lighthouse to be seen a long distance. He improved the lamp, and he enclosed the light with a sort of glass barrel of many lenses

Old Orchard Beach

so arranged that all the light rays would go forth to illumine the sea, and not skyward or toward the ground

or water at the foot of the lighthouse. Often the light can be seen twenty miles away.

Some of the lights are fixed lights, and may be either red or yellow. Others revolve so that they flash forth at intervals. Each lighthouse has its characteristic light. For instance, a light on Marthas Vineyard

Portland Head Light

flashes once in ten seconds, and every fourth flash is red. Provincetown has a red light that flashes every fifteen seconds. Boston Light flashes white every thirty seconds. The government prints a catalogue of all the lighthouses. This tells the kind of light given out by each of them. All ships carry the catalogue, and if a vessel goes astray in a storm it can usually tell where it is as soon as it sights the light of a lighthouse.

The lighthouses are made as conspicuous as possible so they can be quickly recognized in the daytime by their shape or color. One will be white, another red, another striped horizontally red and white, another banded in a black and white spiral.

Besides maintaining lighthouses the government has established life-saving stations where men are ever on the watch during the stormy part of the year to rescue people from wrecks. Hundreds of persons are rescued from death every year, and millions of dollars' worth of property saved.

Fishing, ship-building, and commerce once brought prosperity to the little towns along the Maine coast, but in recent times these industries have concentrated in places with good railway connections. Many of the young people have sought work and a livelier environment in the cities, and the seaboard population has decreased. Every village used to send schooners to the fishing banks. Now very few sail except from Portland. The shore fisheries are, however, important, and more than seventy factories are engaged in canning lobsters, clams, and small herring.

The lobsters are caught in cage-like traps called lobster pots. The pots are weighted with stones and lowered to the bottom where the lobsters crawl around among the rocks and seaweed. Inside of each pot is a fish head for bait, and when the lobster crawls in to get it he is too stupid to find his way out of the small inward-projecting opening.

Clams live buried in the mud flats. The flats are exposed to view at low tide. Then the men and boys dig the clams out much as a farmer digs potatoes.

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"Lobster-Charlie" with a six-pounder

In Europe various little fishes have long been canned as sardines, and since 1875 the industry has developed on the coast of Maine. When herring are feeding, they swim at the surface of the tidal currents and can be caught in weirs. The weirs are closely woven brush fences built out from the shore with the outer end curved nearly back on itself and finally turned a short distance into the enclosure, but having a small open space for an entrance. As the school of herring moves along with the tide the brush fence turns them into the enclosure, where they continue to swim slowly around

in a circle without finding the blind entrance. Presently a boat containing a seine arrives. The seine is stretched across the entrance, and the boat moves around the inner side of the enclosure paying out the

An inlet on the coast

net until its ends are brought together. At its lower edge is a purse line which is drawn to close the bottom of the seine. Then the entire seine is hauled in so that the fish are in a sufficiently reduced space to be taken with dip-nets into the boat. Small steamers collect the catch and deliver it at the factories, where the fish are cleaned while fresh by men, women, and child workers. Then they are soaked in brine, dried on wire flakes, cooked in hot oil for two or three minutes, and packed in small tin boxes. Many full-grown herring are smoked. The heads and other refuse are made into fertilizer.

The Maine coast is a very attractive summer resort region. No matter how hot the weather may be inland, the sea breezes and cool water usually make the air along shore quite comfortable. The coast is delightfully bold and picturesque, and the little steamers that thread the channels among the islands bring a multitude of visitors to it every year. Some places have become prosperous simply through supplying the wants of the warm weather cottagers and

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Where sea and land meet

boarders. One of the largest of the summer colonies is that which dwells on the islands of Casco Bay. Many of the families that have vacation homes there are from Canada and the Western States.

The largest and most beautiful Maine island, however, is Mount Desert, the fame of which is world-wide. It is about fourteen miles long and seven broad. The mainland is close at hand, and the island is separated from it only by narrow winding waterways. There are thirteen mountains on the island, and an equal number of lakes nestle in the hollows and wild ravines. The loftiest height can be seen sixty miles out at sea.

When the white men came to the island it was a favorite resort of the Indians. The waters abounded with fish, and game birds and animals were plentiful on the land. It was discovered by Champlain, the great French explorer, in 1604. His description of it says that the summits of the mountains were all bare and rocky. Therefore, he called it "The Isle of Desert Mountains."

The French started a settlement at Mount Desert seven years before the Pilgrims landed at Plymouth. They built a little fort and a number of houses, and laid out their gardens, and their priests set to work to convert the Indians. But presently an armed English ship from Virginia appeared one summer day and saluted them with a broadside of guns. The settlement was destroyed, and the Frenchmen were seized as intruders in the territory of the king of England.

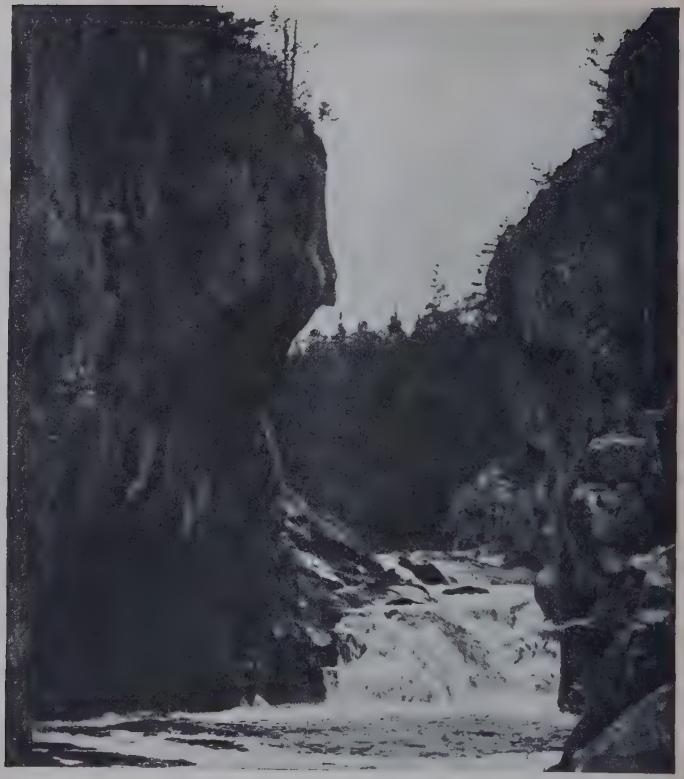
The first white man to establish a permanent home on the island was Abraham Somes of Gloucester. He came to Mount Desert in his fishing boat in 1761, and

cut a load of barrel staves which he carried back. The next year he voyaged to the island with his wife and four children, and built a log-house up at the head of the sound which bears his name. Another Gloucester family came the same year and settled close by. The population gradually increased, but for a full century

Bar Harbor

the dwellers got practically all their livelihood from farming and fishing.

About 1860 the island began to win the favor of wandering artists and parties of college students on a vacation. Bar Harbor was then a primitive village of farmers and fishermen. The land was thin and poor, and the point on which the town afterward grew was bushclad and desolate. Yet in twenty years Bar Harbor became one of the most popular resorts on the New England coast.



Indian Head on Pleasant River

Maine Places, Industries, and Famous People

PORTLAND is by far the largest place in the state. The hilly peninsula on which the city is located is about three miles long and has an average width of less than a mile. It is so compactly settled that almost every available building spot is occupied.

The first cabins were erected on the spot in 1632. For about a quarter of a century it was known as Casco Neck, and after that as Falmouth. Not until 1785 did it become Portland.

In 1676 and again in 1690 it was completely destroyed by the Indians. On the latter occasion no one was left to bury the slain. More than two years later a ship that was voyaging along the coast stopped there, and the crew gathered the bleached bones and buried them.

At the beginning of the Revolution the place consisted of about five hundred dwellings and stores, with many barns and stables. One October day in 1775 the inhabitants were alarmed by the sight of four British vessels entering their harbor. The next day they received a letter from the commander of the fleet stating that in two hours he would bombard the town. A committee at once went to the commander to protest, and a day's respite was secured by delivering to him eight stands of small arms. He offered a further delay if they would bring him four cannon and such other arms and ammunition as they possessed.

The town was completely at his mercy, but at dawn the following morning the citizens held a meeting and resolved to sacrifice their homes rather than to surrender the rest of their precious guns and ammunition. The committee informed the captain of this decision and besought him for a longer respite, but he said, "I will give you thirty minutes and no more."

There were few teams in the place, and nearly all the household goods still remained in the dwellings or piled up before the doors when the vessels' batteries opened on the town. Cannon balls, bombs, and grape-shot were showered on the defenceless village, and most of the people fled for their lives. Many of them saved only what they bore away on their backs. Armed parties from the ships came on shore and applied torches to the buildings. One of the few persons who did not leave was the landlady of the fashionable tavern of the place. She extinguished the fires on her premises with buckets of water as fast as they were kindled. Toward night, when the bombardment ceased and the fleet sailed away, the greater part of the town had been destroyed.

After the second war with England trade with the West Indies rapidly developed. Lumber and fish were the chief exports. The return cargoes were sugar and molasses. For many years Portland's imports in these lines exceeded those of New York and Boston. The molasses was distilled into rum in large quantities until temperance reform, under the lead of the Portland philanthopist, Neal Dow, closed the distilleries.

The first steamboat used on the coast was made by a Portland captain in 1822. He placed an old engine on a flat-bottomed boat, and rigged up some paddle-wheels so that he was able to run the craft to the islands of Casco Bay and some of the adjacent mainland towns. He called his vessel the *Kennebec*,

but the people called it the *Horned Hog*. The next year a steamboat went into service as a passenger vessel between Portland and Boston, and another steamboat began making trips on the Kennebec River.

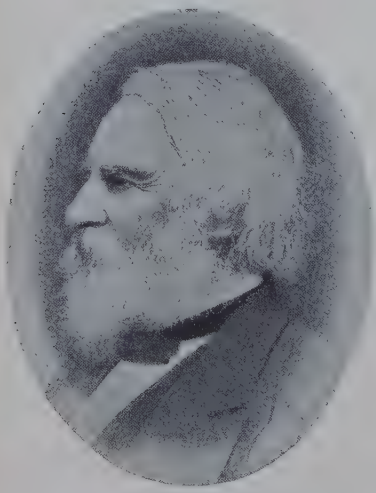
It was a great event for Portland when that city was connected by railroad with Montreal in 1853. Since then it has been a winter seaport of Canada, while the St. Lawrence River is frozen over. Grain, cattle, and other Canadian products arrive on the railroad, and are transferred to steamships, which cross the ocean to England. Other steamship lines connect Portland with the leading American coast cities, and railways radiate from it in all directions to the important trade centres.

On July 4, 1866, a fire-cracker carelessly thrown into a builder's shop started a conflagration which raged for fifteen hours until a change of wind enabled Portland's firemen and engines, with the aid of those that had come from other places, to control the flames. The fire swept over two hundred acres in the centre of the city, burned eighteen hundred buildings, rendered six thousand persons homeless, and caused a property loss of fifteen million dollars.

The first house in Portland to be built entirely of brick was erected in 1785 by the grandfather of the poet, Henry Wadsworth Longfellow. The poet was brought to this house as an infant, and it was his home until his marriage. To the end of his life he stayed there whenever he visited the scenes of his

youth, and many of his best poems were written in it. He was born in 1807 in a three-story frame house in the easterly part of the town near the harbor.

Longfellow graduated at Bowdoin College, in the manufacturing city of Brunswick, and was for some years a Bowdoin professor. Hawthorne was another famous Bowdoin collegian.



Henry W. Longfellow

Harriet Beecher Stowe was living at Brunswick when she wrote "Uncle Tom's Cabin." Her husband was at that time an instructor in the college. She did the writing amid heavy domestic responsibilities, with untrained servants to oversee, a baby to take care of, and several pupils in the family to whom she gave daily lessons with her own children. The sale of the book was enormous from the very first, and it has been translated into at least nineteen foreign languages. The story was dramatized, and probably no other play has been produced so many times.

Bath is the ship-building city of Maine. It has a deep, safe harbor, and can conveniently receive coal

and iron by sea, and lumber from the Androscoggin and Kennebec rivers. The vessels that are launched from the Bath shipyards vary greatly in size and kind. They are both wooden and steel, and include barges, schooners, steamers, and even warships.

Bangor on the Penobscot is the most notable lumber centre in New England. It gets water power from falls, logs can be floated to it direct from the forests, and the river below is navigable for ocean-going vessels, so that the lumber can be sent away to advantage.

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Grand Falls on Dead River

Augusta, the capital of the state, is the largest city on the Kennebec. It is like Bangor in having water-power and being at the head of ship navigation.

The Kennebec and the Penobscot produce wealth in winter as well as in summer, for they are an important source of ice supply. When you pass up beyond where the salt water penetrates you find at frequent intervals the big wide-spreading buildings in which the ice is stored.

Maine winters are cold enough to make the crop a tolerably sure one, and the ice is cut over the very spots where the ocean vessels moor the next summer to take on loads of it which they carry to cities on the coast farther south. The ice harvested from the twenty-five miles of the Kennebec below Augusta is worth two or three million dollars a year.

As soon as the ice is strong enough to bear the weight of a man, claims are marked out by setting up bushes or stakes. A few days later the ice is usually thick enough to be safe for a horse, and then it is gone over with a scraper after every snow-storm, for ice will not make rapidly when it is blanketed with snow. If the snow unfortunately comes before the scraper can be used, holes are cut in the ice to let the water up through. This freezes, and presently a horse-drawn planer can venture on the ice, and the worthless snow-ice is removed.

Usually the ice attains a thickness of twelve inches early in January, and cutting and storing begin. The field is marked off with a grooving machine, and afterward the ice-ploughs go over it cutting deeper and deeper until the blocks of ice can be barred off in

sections of several cakes. There is an inclined plane from the water up to each ice-house. On this incline is a track that can be kept moving by machinery so it will carry the ice blocks from the stream to the building. A canal is cut from the elevator out into the river, and through this the ice-block sections are floated. Near the foot of the elevator the canal is spanned by

At the mouth of the Kennebunk

a plank, and on this stands a man jabbing with an iron bar as the ice sections pass under him and separating them into single cakes. At night some one has to stay beside the canal to keep it open. No matter how many degrees below zero the mercury may go, there you find him toiling back and forth towing a drag made of heavy pieces of wood fastened together in the form of a triangle. This breaks up the thin sheets of new ice as fast as they form.

The harvest comes to an end about the first of March, and after that the river is pretty much deserted until warm weather navigation is resumed. Then, for many months, schooners and barges are always being towed by tugs up or down, or are being loaded at the ice wharves.

One of the worst years Maine ever experienced was 1817. An unusually cold winter was followed by a backward spring, and the weather continued to be so unseasonable that the crops were failures, and the year was long afterward familiarly known as eighteen hundred and freeze to death. Thousands of discouraged farmers sold their property at a great loss and emigrated to Ohio and Kentucky. But within a few years Maine again became prosperous, and many of those who had moved away returned.

Farming is the leading industry in most of the country towns south of the forest region. Milk and vegetables are produced for the cities, and there are numerous creameries. Many fine winter apples are sent away from the farm orchards. Immense quantities of apples, squashes, blueberries, and sweet corn are canned and shipped to the big towns to be sold in the grocery stores.

It is claimed that the climate and soil of Maine produce a quality of sweet corn no other state can equal. The owners of the canneries bargain with the farmers in the spring to plant land to sweet corn and agree to buy the crop at a certain price. In the early

fall the ears are carted to the canneries and husked, and the milky kernels are cut off by machines. After being sweetened and cooked, the corn, while yet steaming, is put in cans which are at once sealed. Finally the cans are labeled and packed in boxes. Blueberries grow wild in all parts of the state, but are particularly plentiful in several rocky townships of Washington County which have been largely swept by fire. Here the blueberry lands are leased in sections of one hundred acres or more, and the lessees burn over about one third of the surface each spring, for the blueberry bushes will not thrive if the land is allowed to grow up to brush or trees. The harvest continues for about six weeks, and most of the hundreds of pickers camp on the grounds. The berries are hauled daily to the canning factory, or are sent away fresh to the city markets. The picking is done chiefly by women and children.

In the northeastern part of the state is a very rich new agricultural country. The soil is loose and open, and the surface gently rolling. Wheat and other grains are grown, and flour is made in the local grist mills, but potatoes are the principal farm product, particularly in the great county of Aroostook, which is nearly as large as the entire state of Massachusetts. The total amount of potatoes produced in the county, the quality, and the yield per acre are all impressive. They are planted, cultivated, and dug by machines. Most of them are sold for food or to be used for seed

in other states, but the smaller ones are taken to factories to be made into starch.

One of the valuable products of Maine is stone. There are great quarries at various places along the

In an Aroostook potato field. The yield was at the rate of four hundred and sixty-two bushels to an acre

coast where granite is blasted out, cut into such shapes and sizes as are desired, and shipped to different parts of the country. Much of the granite is used for street paving or the walls of buildings, but the varied colors of different granites and the enduring beauty of their polished surfaces have led to the use of the stone in the interior of buildings and for monuments in cemeteries. It is very hard, and the fashioning of it has to be done chiefly by means of the chisel and hammer, and by a power drill run by compressed air. This power drill is held by a workman, and he directs its swift blows against the stone.

In and around Rockland are inexhaustible limestone beds that have been worked for two centuries, and the lime produced in Maine exceeds the output of any other state. Formerly the rock was drilled by hand, blasted with powder, and hauled in ox carts to the kilns where it was burned with wood fires for several days to make lime. Now power drills prepare the holes for the dynamite used, and the stone is hoisted on electric cable-ways to cars that take it to the kilns at the wharves. There the lime is burned in a single day by using soft coal and a forced draft.

Among Maine's famous men perhaps none is more widely known than the humorist, "Artemus Ward." He was born in 1834 in the little village of Waterford, some fifty miles north of Portland. His real name was Charles Farrar Browne. As a boy he was so given to pranks that the neighbors freely predicted that he would never come to any good. One of his earliest exploits was the organizing of a circus. He put on a gown of his mother's and her best bonnet, and acted as clown and manager-in-chief, with his village cronies for assistants. His father's red crumple-horn cow, covered with blankets of different colors and having a stuffed coat sleeve for a trunk, served as the elephant. The

"Artemus Ward," the humorist

calves and the dogs and cats did for other strange animals.

When Charles was thirteen his father died, and soon afterward the boy left home to earn his own living. After he grew up and had won fame as a writer and lecturer his "summer loaf," as he called it, was usually spent at the old homestead in Waterford. He died when not quite thirty-three years old.

Another notable Maine writer was Jacob Abbott, who was born in 1803 at Hallowell on the Kennebec. He was one of five brothers, all of whom became preachers and teachers, and, with a single exception, authors. In the middle of the century he was the most popular American writer for children. His Rollo Books were particularly famous.

In later life he lived at Farmington, where he had a place which he called "Fewacres," on high ground overlooking a river winding through one of the most fertile and tranquil valleys in New England. He built bridges, made paths, put up benches for seats, broadened and deepened a brook into a pond for the enjoyment of his boys, and made the place a little paradise.

A third Maine writer, whose stories are particularly noteworthy, was Sarah Orne Jewett. Her birthplace was South Berwick. New England life and nature have never been portrayed more faithfully than in her delightful books.

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